

SALT AND FISHERY,

A Discourse thereof

Insisting on the following H E A D S.

1. The several ways of making Salt in England, and Foreign Parts.
2. The Character and Qualities good and bad, of these several sorts of Salt, English refin'd asserted to be much better than any Foreign.
3. The Catching and Curing, or Salting of the most Eminent or Staple sorts of Fish, for long or short keeping.
4. The Salting of Flesh.
5. The Cookery of Fish and Flesh.
6. Extraordinary Experiments in preserving Butter, Flesh, Fish, Fowl, Fruit, and Roots, fresh and sweet for long keeping.
7. The Case and Sufferings of the Saltworkers.
8. Proposals for their Relief, and for the advancement of the Fishery, the Woollen, Tin, and divers other Manufactures.

By JOHN COLLINS, Accomptant
to the ROYAL FISHERY Company.

E Reg. Soc. Philomath.

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FISH

1. The fish is a small, slender, and very active creature, and is found in all the rivers and streams of the country.

2. It is a very common fish, and is found in all the rivers and streams of the country.

3. The fish is a very common fish, and is found in all the rivers and streams of the country.

4. The fish is a very common fish, and is found in all the rivers and streams of the country.

5. The fish is a very common fish, and is found in all the rivers and streams of the country.

6. The fish is a very common fish, and is found in all the rivers and streams of the country.

To Sir James Shaen, Knt. and Baronet; His Majesties Surveyor General of Ireland, and one of the Kings Chief Commissioners, Managers, and Farmers, of his whole Revenue of that Kingdom.

Honoured SIR,

SOME years since when I had first the happiness of being known to you, and at the same time Laboured under great Discouragements in my endeavours to serve the Publick: You were generously pleased to offer me a Considerable Employment in *Ireland*, which favour I had readily, and thankfully accepted, could I have extricated my self from several Difficulties, which then did, and still do lie upon me.

'Tis now my Fortune to be engaged in the Service of the *Royal Fishery Company of England*, who after they had lost their Stock of Eleven thousand Pounds, (chiefly by reason the *French* took Six of their Seaven Doggers, with their Ladings, &c.) did in *July*, 1686. Sell their Vessels and Stores, and though they came to a Subscription for a New-Stock, yet the affair would have fainted away again, without your assistance, which hath revived it for the present.

And though I am obliged to you in this double Bond of Duty and Gratitude, yet the chief Motive of this Dedication, was indeed the same that occasioned the Publishing this Discourse, *viz.* The great desire I have to see this Company Flourish, by procuring it some considerable Encouragement, which I hope may, and will be done by your means.

The Epistle Dedicatory.

The Success that, contrary to all Men's Expectation, hath attended your Management of his Majesties Revenue of *Ireland*, which you have raised to a far greater yearly Sum, than that which Ruin'd the Persons formerly concern'd therein; as it shewes your skill and conduct in things of this Nature, &c. so I hope it will Enable and Encourage you to proceed vigorously in this Design; and if so, I shall account it none of the least Happineses of my Life, that by my Books, Papers, and Discourses, I have been Instrumental to engage you in it.

All that are acquainted with you know, that your Studies and Endeavours for many years, have aim'd at nothing so much, as the promoting his Majesties Honour and Interest, by the Improvement of his Revenue both in *England* and *Ireland*, which you rightly say must be effected by the increase of Trade and Manufacture, to enrich his People, and make them Happy: I shall therefore use no other Argument to stir up your zeal in this case, but that the best, if not only way to render the King and Kingdom rich at home, and formidable abroad, is by making the Fishery thereof considerable.

But in what I here present unto you, I have not wholly confined my self to this Subject, because I have a particular *Treatise* thereof ready for the Press consisting of,

1. Narratives of the several undertakings of the Fishery in *England*, with the causes of their Miscarriages.
2. An Account of the present Encumbrances or Impediments thereof.
3. An Assertion that *England* can never be considerable in Fishery, without great Encouragements to undertake it in the *North* and *Irish* Seas.
4. The

The Epistle Dedicatory.

4. The great Benefits accompanying a good Fishery.

5. The ill Consequences of losing it.

6. Divers effectual Encouragements and Laws propounded.

To which may be subjoyned two Discourses, the one about the necessity, utility, and instructions of a Council of Trade; The other about the Manufactures of Canvas, Cordage, and Linnen to be made in *England*, as incredible means to render his Majesty, People, and the Fishery Happy.

I shall say no more at present, but that if there could be contrived the raising of a sufficient Fund, to carry on this great affair, Heaven seems to lend us its helping hand, by infatuating the Councils of the *French-King*, who while he aims at universal Monarchy and Trade, drives over hither great numbers of his poor Protestant Subjects, very fit to be employed in the Fishery, &c. which if it thrive, is alone enough to spoil his Project, and to secure unto *England*, the Sovereignty of the Seas.

This is a noble Task, the compassing whereof, would entitle the Persons concern'd to the publick thanks of the Nation, and the Prayers of many thousands of poor People who must be employed therein; how far your Interest and Endeavours can contribute towards it, I earnestly recommend to your serious consideration, and shall always Study to approve myself,

Your Worships

Most humble diligent Servant

JOHN COLLINS.

TO THE READER.

I have in the Preface of my Introduction to Merchants Accompts, intimated that from 1642, to 1649, I went Seven years to Sea, the major part of it, in the Venetian Fleet against the Turks assaulting Candy, during which time, knowing that much Meat bought of the Albanezes in the Gulf of Negropont (aliàs Eubœia) &c. which Stunk; it begat in me a Curiosity to Pry into the nature of Salt, and some few Papers of that kind I have met with in Print, and cited; now these being from time to time augmented by the information of some Saltworkers, have begot the following Discourse, and here it behoves me to return thanks, and make my acknowledgments, which I do, first to Mr. William Martin, sometimes a Saltworker in Cheshire (and Staffordshire,) who many years since gave me an account of the sad Condition of those Saltworkers, accompanied with some arguments for the Encouragement of that Manufacture.

After this, falling into the acquaintance of the renowned Mr. Richard Alcorne, he courteously invited me to come and see his Work, and the performances thereof, where in August, 1680. he Entertained me most kindly, and hath been the Author of the most considerable part of this Discourse, for which he hath my acknowledgment and thanks, in Pag. 69, &c.

Divers

To the Reader.

Divers in England and Ireland, have unadvisedly (to their great Loss) attempted to set up Saltworks in Places unfit for the same; the like undertakings for the future, may possibly be prevented by this Discourse. Now a word of address.

To the Saltworkers, (&c.) in General.

Gentlemen,

I have studied to be impartial, and I hope I have rather deserved your thanks, than reproof; if any of you have any just Exception to what is said, vouchsafe to impart the same in a Letter to me, to be left at the Coffee-House of Mr. Samuel Booth, in Ave-Mary-Lane, and I shall recant in an Appendix, and amend it God willing in the next Impression.

Some of you not thoroughly understanding your own Interest, may repine at an Imposition upon Salt, but I pray (after reading this Discourse,) consider what other redress you can reasonably expect, and that part of such Revenue will support the Fishery of the Nation, and the said Fishery on the contrary will make amends for the same, in regard each Dogger (being a Vessel of 70 or 80 Tons Burthen,) if constantly employed, may spend in the North-Sea Fishery, and in the Channel Fishery for Herrings and Cod, from 45 to 50 Weeks, (of 40 Bushels each) of Salt yearly.

As to the New Invention of making Salt in Pag. 8, the Patentees say, that it will be advantageous or supplemental to all the ways of making Salt yet known, destructive to none, and they hope that great quantities of English Salt will come into renown, and find vend in the Northern Kingdoms, in which, according to an account or estimate found amongst the Papers of the learned William Lord

Brereton.

To the Reader.

Brereton lately Deceased, there hath been vended yearly the following quantities.

Barrels of 4 Bushels each
Winchester Measure.

Gottenburgh	10000
Berghen	12000
The rest of Norway	10000
Sweden and Schonen from Gottenburgh	} 10000
to Stockholm, 8 or 9 Ports	
Stockholm, and as far up as Finland	50000
Riga, Revell, the Narve Curland	
Dantzick, Conningsberg, Stettin, Strael-	} 184000
sond, Rostock. At least as much Salt	
brought by Sea, as all Sweden and Norway	
spends, that is	

Total Barrels 276000

That is 1104000 Bushels or 276000 Wey, this is said to be an estimate, made by Mr. Bedall a Merchant, in 1673, who had Lived long, and Travailed much in those Countries; I knew him well, and remember I recommended him to the Right Honourable the Lord Brereton afore-said.

Now that our Newcastle Salt may grow more famous, by turning Jarrow Slyke, mentioned in Pag. 21 into a Saltwork, Supply a Northern-Fishery, Obtain this Foreign vend, and in General, that the Saltworkers may prosper after their long Afflictions, and the publick reap Benefit by these Endeavours, is the most hearty Prayer and desire of the Author,

JOHN COLLINS.

A
DISCOURSE
ABOUT THE
Several ways of Making
OF
SALT
IN
ENGLAND.

1. *Of Salt made of the Brine from Pits.*

ONE of the most Ancient ways to make Salt, is by boyling of Bryne from Springs or Pits; where- of the most Eminent are found in *Cheshire*, and *Worcestershire*, Of which in Order.

Of Cheshire Salt.

THe cheif in *Cheshire* are at *Northwich*, *Middlewich*, *Namptwich*, of which those at *Northwich* have the perheminnence.

There is one Pit in the Town, and five without the Town: All which afford excellent Brine, in great plenty; of which is made Salt, pure, small or big kernalled, heavy, hard, dry, that loseth little in Bulk, if well kild or prest into the Bag; which are the qualities of the best Salt, and is there Sold at about 3 s. a Load, which contains six Bushels or Measures.

And the Place hath a more convenient Scituation than the rest, as being within five or six Miles of *Fratton*-Bridge, where it is Laden for *Ireland*: And if Encouragements were not wanting, it might be made Navigable to the Sea, by a River running through the Town thereto.

At *Middlewich*, there are seven Pits or Bryne streaths, which yield most rich Bryne, and in great Plenty.

At *Namptwich*, they have one Pit within the Town, and two without, sufficient to serve the Fourth part of the Nation the Bryne being so fluent, but of a weaker kind than those of the other *VVyches*, in which there is some so strong, that it begins to turn to Salt within an Hours boyling, as I am informed.

Whereas at *Namptwich*, the Pans had need to be twice or thrice filled and boyled down, yea, and I am informed that the late Lord *William Brereton* Deceased, made large Leaden Coolers, to put the Salt into when it came out of the Pans, where it would Dry, Harden, and become big Grain-ed. The Reader may take an Estimate of the strength of the Bryne of these Places, by comparing the Quantities of Salt there made, with the quantities of Coales spent, according to a Calculation thereof made, long since by his Lordship, for one *VWeek*, on a Medium, as the 50th. part of a year.

Names.

Of Cheshire Salt.

3

Names of the Salt Works, and Owners.	N ^o Pans.	Busbels of Salt weekly made.	Loads of Coals spent.	Price of Coals.	Other Costs.	Pans that may be.
Northwich.						
				l. s. d.	l. s. d.	
Earl Rivers ———	4	2400	264	15 10	2 0 0	8
Baron of Kinderton	4	2400	264	15 10	2 0 0	8
Mr. Brook ———	6	3342	396	22 15	3 0 0	6
Mr. Marbury ———	2	1300	102	5 16	0 14	at pleasure
Town Works ———	7	2772	462	26 19	3 11 0	7
		12214	1488	86 10	11 5 0	
Spaldenwich.						
Town Works ———	12	1100	282	14 02	3 0 0	40
Baron of Kindertons	7	2210	220	11 00	3 0 4	at pleasure
Mr. Oldfield ———	1	400	52	2 12	0 10 0	1
Mr. George Craxton	1	250	39	1 19	0 10 0	
Mr. Ch. Mainwaring	1	340	39	1 19	0 10 0	
		4300	632	31 12	7 10 4	
Samptwich.						
Town Works ———	24	3840	1016	50 16	7 0 0	at pleasure
Sir Thomas Delves? near Oosterton —}	3	360	200	10 00	2 0 0	
		4200	1216	60 16		

In *Stafford-shire*, there is *Bryne* so weak, that the *Pans* must be four or five times filled and boyled down.

These *Springs* being remote from the *Sea*, are conceived to arise from *Rocks* or *Mines* of *Salt* under the *Earth*, the which are moistened by some *Channels* or secret passages under *Ground*, which may be confirmed from a *Narrative* in the *Philosophical Transaction*, N^o 66. how a *Rock* of

Natural Salt, and a Bryne Pit was discovered in *Anno* 1670. Namely a Person that searched with an Auger for Coles in the Soil of *William Marbury of Marbury, Esq;* lighted upon a Rock of Salt; that which the Instrument brought up was as hard as Allom, and as pure, and when pulverized became an excellent sharp Salt. Out of the Auger-hole Brine flew up more fierce than if it had been squirted out of a *London* V Water-Engin, used for quenching Houses on Fire: The Bryne proved very vigorous and sharp, beyond any of the Springs in other Salt-works, to which this makes an accession.

The which may be further confirmed, by a Narrative in *Transaſtion*, N^o 53. By falling in of the Ground, and loſs of a Bryne Spring where one formerly might have been found, conceived to be undermined by ſubterraneous ſtreams, to wit, in the Lord *Cholmondely's* Mannor of *Bilkly*, about the year 1659. Not far from one of their Moſſes, which is a Moorish Ground, very ſtringy and fat, good for Turfs, a peice of Ground about 30 yards over, without any Earthquake, ſunk down with a huge Noiſe, and great Oaks growing on it, fell with it together; which hung firſt with part of their Heads out, afterwards ſunk further down, quite out of ſight. Into which Pit, they let down a Pitcher tyed to a Cartrope, but could reach no bottom with the Ropes they had there: And according to the Judgment of perſons preſent, the Pitcher was carried away as in a Stream, but when they drew it up, it came filled with a rich Bryne. Since the Pit is filled up with Water, and now doth not taſt Salt, but a very little Brackiſh.

Of the Brine of Pits.

IF there be not Ignorance in the Art of Boyling, nor Coſt and Labour wiſfully ſpared, there may be made Salt good for all Uſes; And in the Counties aforeſaid, many more Springs might be diſcovered, and vaſt quantities of Salt made, more than can be ſpent in his Majeſties Dominions.

In the *Philofophical Tranſaſtion*, N^o 142. we read, that there are ſome ſorts of Salt made in *Cheshire*, that are ſo weak,

weak, that they are forced to keep it in Barrows, in Stoves to dry it, and to make it no faster than they can sell it. And this is confessed in *Philosophical Transaction*, N^o 53. to be rather a fault, than an ignorance in the Boyling, to save Charges either in Labour, Time or Fuell; For even of meer Sea-Water, (whereof 5 or 6 gallons will not yield so much Salt as one of *Cheshire Brine*,) may be made a hard dry Salt, that need not be kept in a Stove, or Box by the Fire-side.

The said *Transaction*, gives an account of the manner of boyling the Brine into Salt at *Namptwich*. They boyl it in Iron Pans, about 3 foot square, and 6 inches deep; their Fires are made of *Staffordshire* Pit-Coles, and one of their smaller Pans is boiled in 2 hours time.

To clarify and raise the Scum, they use Calves, Cows, and Sheeps blood, which in *Philosophical Transaction*, N^o 142. is said to give the Salt an ill savour.

As to the goodness of the Salt at *Northwich*, it is affirmed by Mr. *William Martin*, formerly a Salt worker, that many Sea-Towns of *England*, and most parts of *Ireland* are furnished with it, and it excellently saves their Beef and Fish.

Transaction, N^o 53. The 7th. Query about Salt is,

Whether the Salt made of these Springs, be more or less apt to dissolve in the Air than other Salt? And

Whether it be as good to Powder Beef and other Flesh with, as *French Salt*? To which

Answer is made, that *French Salt* comes not thither, to compare the efficacy of the one with the other experimentally; But 'tis there asserted, that with it, both Beef and Bacon are very well preserved sweet and good a whole Year together: And this Salt is apprehended to be rather more searching than *French Salt*; because it hath been Observed, that Meat kept with this Salt, shall be more fiery salt to the midst of it, than powdred Meat on Shipboard cured with *French Salt*.

To this we say, that Beef may be much longer kept than a Year, and shall be softer and fuller of Gravy, than if it had been cured with *French Salt*, as is afterwards asserted.

'Tis also said, that *Cheshire* sends yearly much Bacon to *London*, which never had any mark of Infamy set on it.

To which I reply out of certain knowledge, that one Mr. *Glover*, who kept a *Chandlers Shop*, had some *Flitches* brought up by his Brother a *Carrier*, that proved to be Naught, Rusty, almost all Fat, the crime of *Cheshire Bacon*, and for being such, was conceived to be worse than any other Bacon in *England*.

The faults are but partial or particular, possibly the Hogs might be over fed with Whey, and be salted only with Brine.

And on the contrary, *Herefordshire Bacon*, where the Swine besides Grass, feed upon Apples, Acorns, Mast, Beans, and Pease, being salted with Clods of *Worcestershire Salt*, proves the best Bacon in *England*, and is said to be brought up Weekly to the Castle in *Woodstreet*.

The Bacon of *Hants*, and other Counties, salted with *Port-Sea*, or *Lemmington Salt*, hath also as good Repute.

In the said *Transaction*, 'tis also affirmed, that hanged Beef, which others call *Martinmas* Beef, is as good and as frequent in *Cheshire* as any Place.

This we shall confirm, by a Relation imparted by the Learned Mr. *Stretell*, who saith

That a *Cheshire Gentleman*, that was minded to kill and store up an Oxe, for his Family, did choose one of the Largest, Oldest, and Leanest, that could be found among many: And after feeding him with Grass, Hay, and Oats, from the beginning of *May*, till towards *Christmas*, the said Oxe not being heated with Driving, was killed and salted up, the Chines and other peices being but gently rubbed with *Northwich Salt*, and put into powdering Tubs, and there now and then as occasion required were rubbed over again with Salt.

That after 14 Months keeping, a Chine of this Beef was Roasted, and proved delicious beyond compare, full of sweetness and Gravy, but moderately Salted, and Eat with a flavour like Marrow; the like he never expects to meet with, should the Cattle either be driven, or the Salt prove bad.

Of Worcestershire Salt.

SEE *Transaction*, N^o 142. where there is a Narrative of the manner of Boyling, and an Account that about *Droytwich*, within 4 Miles of *Worcester*, there are many Salt-Springs, particularly one in the great Pit at *Upwich*, of which is made 450 Bushels of Salt in every 24 Hours; so strong that 4 Tuns of Brine make one Tun of Salt.

The Brine is said to be so strong, that it cannot be Boyled in Iron-Pans, neither Cast nor Wrought, because the former breaks, and the latter is too soon Corroded.

But this is denied, and the contrary affirmed, in a following part of this Discourse, about *Pansea-Salt*.

They say they are therefore driven to the use of Leaden-Pans, 5 foot and a half long, and 3 foot wide, whereof the sides and ends are beaten up.

Their Fuel was formerly all Wood, but since the Iron-Works in the Forrest of *Dean* have destroyed the Wood there, &c. they cannot at any reasonable distance be supplied for one quarter of a Year, and are now forced to use Pit-Coles, that are brought 13 or 14 Miles.

Concerning Leaden Pans, we read in *Transaction*, N^o 8. That the Salt-water at *Lunenburg*, being more greenish than white, and not very transparent, is about the same Nature, and hold with that of *Hall* in *Saxony*, (these being the two chief Brine Springs in *Germany*) and hath a mixture of Lead with it; Whence also it will not be Boyled in Leaden Pans, and if it held no Lead at all, it would not be so good, that Metel being judged to putrify the Liquor.

Whence also the Salt of *Lunenburg*, is preferred before all others, that are made of Brine Springs there.

To this Passage in the *Transactions*, I subjoyn an Information of the Honourable *Robert Boyle*, Esq; of the *Royal Society*, to wit, that at *Hall* in *Saxony*, they have a wear Brine Spring, from whence perpetually issuing Brine on *Hovels*, covered with Mats close made of Reed, Straw, Flag, &c. the Brine running through is much evaporated, exhaled.

haled and enriched in the Sun, before it be Boyled, and that in imitation hereof, a cheap Engin is invented, that will cast or winnow Sea-water so long in the Air, till it snow down a weak sort of Salt ready to dissolve, the which is afterwards Boyled, and makes big grained Salt; an Experiment whereof as Dr. *Hornick*, and others affirm, hath been tried before his Highness *Prince Rupert*, in the Spring-Garden, in the presence of Monsieur *Harrell* the Kings Apothecary, and many others: Moreover there are a new sort of Furnaces for quick Boyling invented, by virtue whereof 'tis said, that now 4 or 5 times as much Copperas, Salt, Allom, &c. may be made at the same Charge, as was formerly wont to be; an Experiment whereof in Boyling Copperas, hath been tryed before Sir *Nicholas Crisp*. And the assertion is upon good Grounds, believed by the Honourable *Robert Boyle* aforelaid, there being two Patents granted for the same: The Prior to an *English*-Man, and the Latter to a *French* Man: On occasion whereof a Discourse arising about another Patent, craved for separating good fresh-Water, from Salt-Water; Mr. *Boyle* affirmed, it had been before performed by himself, that he had presented his *Majesty* with some bottels of Water so made, and with the Secret, that it would be of great use at Sea in many Emergencies, yea and of Ordinary use in saving much Cask and Stowage; That all Pump-Waters had a little saltness in them, and that the Waters thus made, were wholesome, and no saltier than Pump-Water.

The *Transaction*, N^o 142. about *Worcestershire* Salt, hath not answered the *Query* about the Time of Boyling, the which indeed is too soon; And if this strong Brine be not allay'd with weaker, or Fresh-Water, they are necessitated to put a small quantity of Rosin into it, to make it small Grained; And when there cannot be time enough to Boyl, and cleanse a strong Brine from its Scum, the Sand cannot be got out, and ill qualities must in some measure, remain still in the Salt.


Here, in *Cheshire*, and other Salt-Works, they use to clarify and raise the Scum of the Brine, by putting a fourth part of the white of an Egg, into a gallon or two of Brine, which will lather like Sope; a small quantity whereof put into each Pan, raiseth the Scum.

Of Worcesterfhire Salt.

9

The water of Salt-Springs, is very cool at the bottom of the Pit; infomuch that when the Briners go to cleanse it, they cannot abide in above half an hour, and in that time drink much Strong-water; However it never freezeth. See *Transactions*, N^o 53. and 152.

Whence we have the following Arguments, to prove the Excellency of this kind of Salt.

 **T**HE Salt commonly made, after Boyling is dry in 4 hours time, and keeps so without Fire till it is Sold, which may be half a year, or three quarters of a year after it is made, and is not so apt to dissolve as *Cheshire* Salt; Nor as that which is made, by dissolving Bay Salt, and clarifying it.

2. There can be none whiter and freer from Dross, and it is a weighty Salt: A *Winchester* Bushel being in the said *Transaction* said to weigh half a Hundred.

3. In the time of the *Dutch* War, this Salt was carried into the *West*, where they had before none but Foreign Salt; where at first using, they complained it made their Meat too Salt, which was because they used as much of it, as of *French* Salt, consequently it is better.

4. It hath preserved Flesh for long Voyages, and hot Climates, to wit, to *Jamaica*.

5. Herrings have been salted with this Salt in *Ireland*, and brought over, which have been whiter and better tasted, than those salted with Bay Salt.

6. It is an ordinary way in powdering of Beef, to give it but one salting, to keep it the whole year.

7. They have a sort called Clod Salt, which is digged up from the bottom of the Pans with a Picker, being the strongest kind of Salt, and most used for salting Bacon and Nears-Tongues; It makes the Bacon Redder than other Salt, and causeth the Fat to Eat firm. And if the Swine are fed with Malt, it hardens the Fat, almost as much as if fed with Pease, and salted with white Salt: And is used by Country-Women to put into their Runnet-Pots, and as they say, is better for

their Cheefe; these Clods are used to Broyl Meat with, being laid on Coles. This sort of Salt is accounted too strong to salt Beef with, it taking away too much of its sweetness.

Besides the common Salt, it is here ordinary to make Loaves like Sugar-Loaves of the finest of the white Salt, which will keep dry without a Fire. Whereas at *Nampwich*, they are kept long in a Hot-House, and Baked twice or thrice in an Oven, and then placed on a Stove or Chimney Corner, and covered with a Hose.

Mr. *W. Martin*, that hath a Salt-Work in *Staffordshire*, and hath had occasion to View and Surveigh all the Salt-Works in *Cheshire*, affirms, that what is all eadged concerning the Salt-Works in *Worcestershire*, the same may be done and said of the Salt-Works in *Cheshire*.

2. Of Salt made by Boyling of Sea-Liquor.

THE want of Brine-Springs on the Eastern Coasts of *England*, and the over-deariness of Foreign Salt, begat the necessity of making much Salt at *Sheilds*, and in the Counties of *Durham*, and *Northumberland*.

The Pans there used are made of wrought Iron, of 18 or 19 foot long, 12 foot broad, and 14 inches deep; the Fewel being for the most part, a sort of crusty, drossy, mouldring Coal, taken from the upper part of the Mine, which if not spent this way, would be for little or no other use, to the prejudice of the Coal-Miners, and be mingled with the better sort of Coals, to the great dammage of the Buyers, especially those of *London*.

The Sea-water they commonly at Spring-Tide let into Ponds called Sumps, from whence 'tis pumpt into their Pans, which are six or seven times filled, and half or more every time Boyled away, before it becoms Salt.

Sometimes there are great freshes in the River of *Tyne*, which impair and weaken the Sea-water, but at such times they do not admit the Sea-Liquor into their Ponds, neither need they, for through want of Vent, they give over working five Months in a year.

Of Newcastle Salt.

11

Of late they Boyle the Salt better, and make it harder than they formerly did: Salt made by Boiling of Sea-liquor, being moist and apt to run to VVater, hath undergone a bad Repute.

Dr. Beale, in *Transaltion*, N° 103. saith, that our good Houswives do find a great difference between our common Bay Salt, and the several other Salts which are in use amongst us.

VVe find some white Salt very faint, and the price infers a difference between *Spanish*, *French*, and *Portugal* Salt.

Of Newcastle Salt.

IF Salt of this kind be well made, it may be very serviceable for Bread, Butter, Cheese, and Meat for Household expence, and without hazard may serve for Meat, and Fish that is not intended to be preserved for long Voyages, and through hot Climates, but a Salt that runs to water, cannot be proper to cure Fish withall, that are salted in Pile or Heaps, for the Salt besides the ill quality and tast which it hath in it of bitterne, runs away from the Fish, before it hath wrought its Effect. And the Fishmongers say that instances may be given of whole Ladings that so miscarried,

A Merchant in *Abchurch-Lane*, had a cask of Chines of Bacon, and Chines and other pieces of Pork, that was sent as a Present from *Newcastle*, most of it stunk before it Arrived, and that which did not, was ill-relished and oversalt.

On the contrary, the like hath been sent to Mr. *Binglos*, a Merchant in *Abchurch-Lane*, from *Portsmouth*, salted with *Port-Sea* Salt, which proved most excellent: divers of the Chines were taken out, and hung up with Packthreds, and so kept sweet for 4 or 5 Months, till there was occasion to spend them, and then proved Juicy, well-tasted, and not oversalt.

But it may be, there was either negligence or want of skill, in salting the said Pork with *Newcastle* Salt, or new

Salt

Salt made use of, instead of that which was old and fit for the purpose; for during our late intestine VVars and Troubles, Beef salted with *Shelds* or *Northumberland* Salt, hath been preserved sweet and good, for above 2 years keeping in *Scarborough* Castle, during the Seige thereof.

Of which take the Narrative following, of Mr. George Cowart Merchant in *Basing-Hall*-street.

HE saith, he was in those times a Servant under Sir *Hugh Cholmely* Deceased, who was Governor of the said Castle; who employed *Thomas Knolls* his Cooke Deceased, to Salt and Pack up the said Meat, which he did in the manner following.

1. The Oxen being driven in cool, were afterwards Slaughtered, and hung up in Quarters, till the Meat was cool, which was afterwards cut into 4 pound pieces, and were well rubbed and salted with Salt, and pack't into Tubs or Cask, with Salt between every lay.

2. About 12 or 14 days after, the Meat was took out and permitted to dreyn 24 hours time or thereabouts, and then new salted and packed up again, with Salt covering the Meat in the head of the cask.

3. In the mean while the Brine remaining in the Cask, was Boyled for the space of half an hour, and well scummed, and afterwards permitted, about a day to settle and Cool, and then the top Liquor was powred off, and look't like Canary, the sediments and bottom being thrown away as useles.

4. This liquor was powred at the head of the Cask, to replenish all Vacuities, and then the cask were covered over or headed up, the Meat being now judged sufficiently salted and preserved for Continuance, which came to pass accordingly, part of it being spent after two years end.

And, that none of it in all that time proved bad, and he believes it would have kept much longer, in regard some of it was afterwards found amongst the Rubbish or Ruines of the Castle,

Castle, which was in part shot down during the Seige, which Beef so found, proved very sweet and good also.

The like may be said concerning the late miscarriages of the North-Sea Fisher Boats of the Isle of *Thanner*, using this Salt with ill Success, whereas others have had their Fish cured to content.

And there is no doubt but as good Salt is, and may be made of Sea-water at *Newcastle*, as in *Scotland*, where many *North Sea* Boats bound to *Iceland* take in their Salt, particularly one *Cloudesty Cooke* Master of one of the Royal Fishery Companies Doggers, in 1677 took in his Salt there, by order of the Company, moved thereto by these Reasons.

1. An old Salt is judged much better and fitter for use than Salt new or lately made, in regard it hath had time enough to drip and harden, if well made, or dissolve if otherwise.

2. In regard there is little Salt, (as was alleadged) to be had at *Newcastle*, that was old enough for Fishery use.

3. In regard Salt was to be had much cheaper in *Scotland* than at *Newcastle*, where Coals, Dyet, and Labour are much dearer than at the Salt-Works in *Scotland*.

With *Scotch Salt*, he cured the whole Lading of Cod, having none that were weak or slab salted.

But of the Fishery of *Iceland*, and the miserable Life of the Inhabitants, we shall have a separate Discourse when we come to treat of Stock-Fish, Haberdine, Green-Fish.

Of Salt upon Salt, or Salt made by Refining of Forreign Salt.

THE *Dutch* above 50 years since finding the ill qualities and effects of *French Salt*, both as to Fishery uses, and for curing of Flesh for long Voyages, besides the discolouring of Butter and Cheese, Prohibited the use thereof by Law, and being at Wars with *Spain*, Traded to *Portugal*, *St. Tubas*, and the *Isle of May*, for Salt granulated or kernald meerly by the heat or vigour of the Sun, and sell to the refining thereof at home by Boiling it up with Sea-water, and thereby cleansing it of

of three ill Qualities, to wit, Dirt, Sand, and Bittern. Of which more hereafter.

And *French Bay Salt* it self might be thus refined, but proves much worle than the Salts aforementioned, of which so refined may be made Salts good for all intents and purposes: And this may be performed on the Sea-Coast, where there are these Conveniences.

To wit, Ships or Vessels may Unlade or Lade Salt, where there is a River or Harbour of Salt-water, not incumberd with Freshes, or a Bank in which to make Sluices to admit at spring-Tides Sea-water into Ponds or Receptacles, and where there is Coal or Turf plenty and cheap.

4. Of Salt made upon Sand.

IN the *Philosophical Transaction*, N^o 103. we read that in *Varro's* days it was the reproach of our *Transalpines*, (who dwelt much further towards the South than we do,) that on the *Rhine* there was then neither Vines, nor Olives, nor Apples, nor Sea-Salt, nor *Fossil-Salt*, but they were driven to the poor shift of using the ashes of burnt-wood for their Salt.

Dr. Beale, in that *Transaction* further saith, we have formerly made hard shifts for it in *England*; and that at *Wyre-water* in *Lancashire*, Salt is gathered out of heaps of Sand along the Sea-side in many places; upon which sand (saith *Speed*) the People powre water until it gets a saltish humour, which they afterwards Boil with Turf, till it becomes vvwhite Salt.

A Letter from a *Cheshire Salt-Worker*, gives the following account of it.

Namely, that through Sluces in the Sea Banks, chiefly at spring-Tides, they let Sea-water into Ditches and Trenches from whence they sprinkle it, or lave it upon level Beds of Sand, that a scurf or Crust may be begotten by the heat and vigour of the Sun, which is afterwards raked up into to heapes and carried in wicker Baskets or Fenders to Brine Wells, where powring Sea-liquor to it, it carries away the saltish humour, and leaves most of the sand behind; And if
any

any accompany the Liquor it afterwards settles to the bottom. The Brine thus made is afterwards Boyled into Salt, and makes a good kind in *Lancashire*, but reddish, that is used for curing of Fish, Flesh, &c.

The following account of the manner of doing it in *Hants* is more particular.

The Trenches are made between every two Rods of Ground in breadth called Beds, whose length may be such as is thought convenient.

The Beds are made upon Sand, on which they bring Sea Mud mellowed by the Sun and the Frost, which they also call Sand, and endeavour to make as fine, as a Gardiner doth a Bed to sow Onions upon; this done, they lave from their Ditches or Trenches, so much Sea-liquor as the Beds will receive for the present Time, which in two days time in hot weather, will be exhaled, the fresh from the salt.

Then the Earth appears in Clods, which they Harrow, and bring on a Drag, and a Rowle, make fine, and repeat Sea-liquor, this twice or thrice practised makes the Earth as salt as is desired, with a scurf of Salt upon it, which done, they remove it in Barrows to Store-Houses to keep, and immediately supply their Beds, and so continue all Summer.

And when there is occasion to use it, they bring it out in Barrows, and put it into Wicker-baskets like Beehives, that have Dreyes at the bottom, to which putting Sea-water over the VVell, it carries away the Salt into a Well, from whence in Pales it is removed to the boyling-Pan, and being well Boyled makes an excellent Salt for Flesh or Fish free from all Dirt and Sand, but this way of making Salt is accounted Laborious, and consequently not much used.

Any Earth that may be made mellow and light, and will imbibe Liquor may be useful; but that which hath a mixture of harsh shuttle Sand, or such as will make Morter, is improper for this purpose. To supply that which is proper, In *Lancashire* they use to pare the Surface of a flat of Sand that is overflowed by the Sea at spring-Tides, two or three days before those Tides fall too low.

Of Jerbo Salt.

AT *Jerbo*, a place in *Barbary*, 30 Leagues to the VVestward of *Tripoly*, is much Salt made, on a plain of red Sand, by the Sun's Vigor: the Sea (which here ebbs and flows but about a foot,) making its way through the Sea sandy-Banks into the Plain afore said. A *Bassa* seeing a Ship Arrive from Sea, and Anchoring on the shoales where is safe Riding, estimates her Bulk, and sells her Lading for about two Dollers a Ton, the which is carried on Board by *Turks*, or *Moors* into the bargain.

This Salt is of so strong a Grain, that it will not readily Dissolve in fresh water, wherefore if it be necessary the Mariners put fresh water to it, to wash out the Dirt and Sand, pouring away the Liquor that will run.

Of Salt upon Sand, Embodied by the Sun.

WHere the Sun shines hot, and the Tides vary but little, 'tis easie to have Salt enough, as they have in many places of the *Streights*.

VVith Salt of the like kind made near *Smyrna*, Beef at Midsummer hath been excellently well preserved in manner following.

The Ox hath been killed one day, and cut out into pieces and salted the next, the Salt hath been beat very small, and the Beef being very well rubbed therewith, it was footed or pressed into a Cask, with sprinklings of Salt between each Lay, in which condition it was permitted to stand 48 hours, for close packing made the Blood to arise above the Meat which was powred off, then a Brine was made, of fresh-water, and Salt as strong as might be sufficient to cause the Salt to Dissolve, (which it will not, if too little water be put in,) then the Meat was washed in this Brine, and well salted again as before, and then the cask filled up with the Brine afore said. This was imparted by Mr. *Richard Norris*, an ancient experienced Master or Mate, who now teach.

teacheth Navigation and Mathematicks in *Cruched-Fryers*, and saith he hath seen it often so done, and none of the Meat stunk.

Observations thereon.

1. **W**E grant that Meat may be thus preserved from stinking for a years time or more, but withall affirm that such Salt being encombred with Bittern, shall impair it in size gravey and goodness, from time to time till it be reduced to a rotten or mortified substance.

2. The bloody Brine, if there had been an intention of saving Salt, might have been boyled and scum'd, and after its settlement been powred off from its sediments, and used again to good purpose, being freed in part from an ill Quality.

3. Meat in hot Countries, hath been cured with hot Salt and hot Brine, and that it should be so, is the advice of Mr. *Richard Alcorne*, the contrary being proper for cold Climates.

4. He also thinks the letting of the Cask down into the Sea or Water, to be a good means to cool the Meat, and prevent all fermentation.

Many Islands in the *Atlantick* and *American-Ocean*, yield abundance of Salt made of Sea-water by the meer vigour or heat of the Sun, such are the *Tortudos*, but especially the Isle of *May*, one of the Islands of *Cape-Verd*, where whole Fleets of *Newfoundland-Men*, and *New-Englanders* use yearly to Lade: It lies in the North Latitude of about 15 degrees, is Peopled by *Portuguezes*, and their *Negros*, and hath a Governour; 'tis an Island of an Oval form, about Eight Miles in Length, is stored with Cattle, as Beef, Goats, Hogs, Asses, &c.

The Salt there is thus made, In the Raines (or that Winter they have) the Wind veres about more Southwardly than at other times, and the Sea swells higher, and makes its passage through the Banks, (as at *Jerbo*) into a shallow Lake of about 3 Miles in Length, and in some places about half a Mile in breadth, yea and covers a large Plain of Sand,
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where in Summer time when the Sea is faln lower, it Crufts or Kernes into large Salt, yea and cakes into large pieces, where it is by the Inhabitants, or (if need be) by thofe that come to fetch it laid up in heaps, and afterwards conveyed by Affes or otherwife to the Water-side, and thence Ship-ped: This is not done without paying fome small acknowledg-ment to the Governour for the pains of the *Negroes*, who alfo make heaps when need requires, of that which the Lake yields; much tribute is not exacted, in regard Salt enough may be had elfewhere for little or nothing, yea and in many places the Rocks afford great hard pieces or Logs of Salt made only by the Sun, particularly at *Dartmouth* in our Channel as one of his Majesties Cooks informes me, fuch are to be had. The Ifland affords no good Harbour againft Storms, yet Ships may ride near it in Water either shallow or deep enough: At prefent we have a fair Correspondence there, which was once interrupted, by reason an Englifh Ship Robbed them of fome of their Servants, &c. And fold them for Slaves at the *Barbados*, which injury was avenged on a *Plymouth* Ship that next Arrived.

5. *Of Salt made from Brine, raifed by the Sun, purged and embodied by Fire.*

Salts of this kind are made at *Lemington* in the new For-reft of *Hants*, and about three Miles North-Eaft from *Portsmouth*, which Town is fituated in an Ifland called *Port-Sea* Ifland, from whence the Salt hath its Denomination.

The place where fuch Salt is made, is called a Saltwork, concerning which the following particulars are requifite to be infifted on.

1. The Quality and Situation of the Ground.
2. The Banking or Recovering the fame.
3. The making of Brine-pans, and in them Brine by the Suns Exhalation, with the manner of doing thereof.
4. A difcourfe of Boyling-Houfes, Grates, Iron-pans, and the Art of Boyling the Brine into Salt.

Of each of thefe in Order.

1. *Of the Quality and Situation of the Ground for the most Convenience.*

1. **T**He Ground as to Matter, ought to be a Sea-Mud, Oase or Sleech, Overflowed if it may be at the lowest spring-Tide 3 foot, and whereas it is Observed that the highest spring-Tide, especially if it be a storm from the Offing, may be 9 or 10 foot higher than the lowest spring-Tide; this renders Banking chargeable and hazardous, if not Land-locked, or within a Creek or Arm of the Sea, where it is not annoyed with freshes.

The reason of such Overflowing is, that there may be made feeding Ponds, as they call them, with Walls of Earth, to keep Sea-Liquor in of any Dimensions, two foot in height one above another, so that the Lowest may be filled by a little Sluce in the Bank, at the lowest spring-Tide; the rest at other higher or spring-Tides, where this Liquor which is called Stay-Liquor will improve by the Sun and Wind, before it be transmitted into the shallow Brine-Pans, which are supposed to be made on lower Ground, so as to receive supplies from these Ponds whensoever the same is requisite. These Ponds are replenished with Fish from the Sea, as Mulletts, Place, Flounders, Eeles, &c. Where they increase incredibly, and much exceed in goodness and largeness, fresh River Flounders and Eeles; and where there is convenience for such Ponds, there may be likewise for Oyster-Pits.

2. The Ground as to Quality must be a strong Sea-Mud, of a nature like Clay, that will retain Liquor without transfusion: And if the Ground be not sand, Gravel, Chalk, or Moor, 'tis probably fit for the purpose, and more proper than Clay, (as being of a looser Body,) which is more difficult to be wrought, requiring three times the Labour, and is more apt to split or crack.

3. This Mud for conveniency, ought to be eight foot or more deep, for the making of Ponds exposed to the Weather, called Cisterns, or common Receptacles to keep Brine in, without soaking away after it comes from those Pans called Sun-Pans, where it is supposed to be made sufficiently

strong, and is transferred into these to grow more mature or mellow with Age: In these Cisterns the Brine may be impaired by Rain-water, in such Case that swims uppermost, and the Brine may be pumped from the bottom of the Pond, by square Pumps leaning on the side of the Bank, the bottom of the Pump being fastned into a Basket.

If one of these be covered over with a Tiled-Roof, it is called a Brine-House, to retain store for Winter Boyling; And a Tyled-Roof is more convenient than Thatch, for when Repaired, the Strawes will fall into, and discolour the Liquor. The sides and ends of the Brine-House, ought to be Posts of Timber, with Hurdles behind them; the Ground being such as will not imbibe the Liquor as aforesaid.

If the Ground do not admit such Depth, these inconveniences cannot well be avoided; Cisterns must be made above Ground.

Into which the Brine must be Pumped or Laved, with great Charge and Labour, which the Workmen in wet-Weather will decline, to the loss of much Brine that might be saved.

The Brine in the Tiled Brine-Houses, freezeth not in Winter-time, but in the uncovered Cisterns, the Ryme or Fresh at the Surface will freeze, which ought to be removed.

2. *As to the Situation.*

IT ought to be such, where fair Sun-shiny-weather is most frequent, where the Wind may have free Access, near to a Coal-Mine, or a good Turf if possible; However not far from such Port, Creek, Harbour, or Mole, where Coals may be Landed, and Salt Exported.

If convenient choice can be made, it may resemble a great Pond; or Lake rising on each side, with a Channel in the middle of it, which being Banked athwart, will lessen the height of Banking, and consequently the Charge, and if it be in a Salt-water-River Land-Lockt, the Bank is more secure from dangerous Breaches, that may be made in it by the Sea.

Near

Near the Channel in the middle may be made a Key, whereon to Land or unload Goods, from Vessels that come up, or go down the Channel, athwart which in the deepest part may be made a Sluce, with strong Gates or Portals like Shop-windows, with Hinges that shall open Sea-wards to carry off Freshes or Floods, and when the Sea comes in shall shut and keep the same out, and towards the Land may have other Gates to be drawn up with Windlasses.

It may be objected, *that these qualifications seem somewhat difficult.*

Answer, 1. Places enough may be found if Encouragement be not wanting.

2. It may be there are but few more necessary, viz. one in the West of England, where Hamose-water near Plymouth is conceived to be a proper Place, and the like some suggest concerning Falmouth.

Possibly another more Northward might be desirable and that might be at Farrow Slyke, a little within the Mouth of the River Tyne, (or Newcastle) to the incredible advantage of a Northern Fishery, for Salmon, Cod, and Herrings, but of this more hereafter.

3. Of Banking in, and Recovering the Ground.

THIS is to be performed by aid of Ginn-Boats, to drive into the Mud rows of Trees, and Posts sharpened at the Lower end; to shape out a Walk.

These Trees to be bound together long-ways, and broad-ways like the Ribs of a Ship, with flitters or pieces of Oak, or cross Bars; And after good store of stones have been thrown into the middle and parts adjacent to the Channel, where these Trees ought to be thickest and longest, the same to be boarded up and the whole to be filled, as and when it shall seem meet, with Stones, Gravel, Clay, &c. which will force the Mud out on each side, and beget a Declivity, which Seaward may be hardened with Gravel to

come

come a narrow Walk, whereon to stand to drive in Stakes as occasion shall require, whereto to fix Hurdles or Hedges, which will be filled with Sea weeds, and will much defend the Bank from being washed down by the Waves, or dashings of the Water in stormy-weather.

After the same manner many of our bad Roads may be mended, particularly one called *Battleton-Lane*, near *Hockly* in the 'Hole', is so bad in Winter-time, and so full of deep Slowses, that Wagons cannot pass it without great difficulty, and divers Teams to draw them through, with hazard of overthrowing, which forces them to give over and Travil with Horse-Packs, yea in the middle of *September* last, when the Weather was good, it was very troublesome.

In the Banks aforesaid, besides the great Sluce in the Channel, there must be divers little Sluces of different heights, according to the difference of Tides, to let in Sea-water, to replenish the feeding Ponds before mentioned.

The Bank being made, and the Sea kept out, after a hot Summer or two, the recovered Mud will become dry, rugged, and full of great Cracks, Clefts, and Chafmes, which must be filled up with Earth, and the Ground reduced to feeding-Ponds as before mentioned, and the rest to Levels for Brine-Pans. Of the Mud thus recovered, may be made excellent Bricks; this kind of Earth being of a durable conservative Nature, such of it as is designed for Tillage or Pasture Ground, must be deep Ploughed up and Harrowed, that Rainy-water may wash the Salt out of it, or that it may be cured with Lime or Marle, and when so done, proves a most admirable fertile Ground, for Grasse and Corn, and is often used as a Compost to improve Barren Land. See *Philosophical Transaction*, N^o 54, Page 179. where you will read, that Ground where Salt or Brine is spilt, is when dug up excellent Muck for Grazing Ground, and even the Bricks that are thoroughly tinged with it, are very good Muck, and will dissolve with other Muck, and fertilize Grazing Ground considerably for at least 4 years.

Of the usefulness of Salt, in rending Land fertile.

TO which we shall annex divers instances of the like kind taken from Mr. *Hartlib's Legacy*, Sir *Hugh Platts Jewel House of Art and Nature*, which he says page 128, were found out by meer chance, and not by Industry.

1. The first was of a silly Swain, who passing over an Arm of the Sea with his Seed Corn in a Sack, by mischance at his Landing fell into the Water, and so his Corn being left there till next Low-water, became somewhat Brackish, yet such was the Necessity of the Man, as that he (notwithstanding that he was out of all hope to have any good success thereby, yet not being able to buy any other,) bestowed the same Wheat upon his Plowed Grounds, by the advice of a worthy Gentleman who imparted the same. In fine when Harvest-time came, he reaped a Crop of goodly Wheat, such as in that year not any of his Neighbours had the like, yet the Experiment hath not been further prosecuted.

2. A Person of his own Inclination, sowed a Bushel of Salt long since at *Clapham*, upon a small patch of Barren Ground, which to this day remains more fresh, green and full of swarth, than all the rest of the Fields about it, but this he did not prosecute further, in regard a Bushel of Salt costs more than two Loads of Dung.

3. It is the daily and usual practice in the Western parts of *England*, for the people to carry their saltish Sands into their Barren Grounds, whereof some of them do lie five Miles distant from the Sea, and find the same exceeding profitable, for that thereby their Inheritance is enriched for many years together.

More particularly, Mr. *Carew* in his *Survey of Cornwall*, relateth that they use a fat Sea-Sand, which they carry up many Miles in Sacks, by which they have very much improved their Barren-Lands.

4. The surrounded Level at *Erish*, hath been most copiously commended for its fertility, in those two Breaches which are now Banked.

5. At

24 *Of the usefulness of Salt in rendring Land fruitful.*

5. At *Namptwich*, upon the fall of any great store of Land Waters into their Pits they are forced to empty and draw out all the fresh-Water, which always floates upon the Brine, and to bestow the same in such places as are nearest, and therewith also emptying some of the Brine with the fresh-Water, they find in time this Earth so strongly seasoned with these brackish-Waters, that no Soile or Dung is comparable unto it, for the manuring of their Ground.

6. In the Salt-Marshes of the Isles of *Xaintoign*, there are little Hillocks on which is mowed as good Grasse as in many other places: And those Hillocks do come up of the Grounds and Washings, thrown up from the bottom of the said Marshes, which are as Brackish as the Sea-water; and yet nevertheless saith Sir *H. Platt*, page 104. I did never see any fairer Corn in my Life than groweth in them.

7. The Vines of the Country of *Xaintoign*, which are planted in the midst of the Salt Marshes, do bring forth a kind of black Rayfin, which they call *Canchets*, and whereof there is a Wine made that is nothing inferiour to our Hypocras, in which they use also to dip their toasted Bread; and their Vines are so fertile, that one Plant of them doth bring forth more Fruit, than six of those that grow about *Paris*, so that 'tis evident, that Salt doth help the Goodness, Sweetness, Maturity, Generation, and preservation of the said Vines; also the Air it self is benefited thereby, albeit here is no design to prove that common Salt agrees with all kind of Plants; yet all manner of Fruits Planted in the Salt-Marshes of *Xaintoign*, and all wild Herbs, Thornes, and Thistles prosper so exceedingly there that no where better.

An Advertisement imparted by the Learned and affable Doctor Robert Wood, to prevent the Smuttiness of Wheat.

8. **I**N the South West of *Surry*, their Wheat-fields were formerly much annoyed with Smut or Brag, viz. A black dust in the Ear instead of Corn, which they never failed to cure in the manner following. To wit, they made a strong Brine of a peck of Salt, dissolved in about 5 or 6 pecks of water, in this Brine (a little warmed,) they infused all Night about two Bushels of Seed Wheat, namely what they intended to sow the next Day. The next Morning early they powred the Brine and Wheat in it, into a large Basket, or Flasket set over a clean empty Cask to receive the drayned Brine, and then let it stand to dreyn or drop, till themselves had Breakfasted, and their Plow-Horses foddred; the Brine they preserved till Night, for the like use, with some little addition of Water and Salt: The Wheat they powred out upon a clean Floore or Pavement, and mixed with it some slacked Lime to dry it, and make the Grain (which thus resembles small Comfits) separate from one another in Sowing, and so carry it into the Field and Sow it: The Crows and other Fowl finding it too hot in the tast will not Eat it, as they usually do other Seed; Smutty grain thus Sown, yields a clean Crop, and the Salt and Lime together do contribute some warmth, as well as lust and heat to the Seed, and help the defect of other Manure.

This is used in several other parts of *England*, and upon tryal it will be found, that if one furrow be neglected, that will Miscarry, whereas another that is not, is remedied.

To which Experiences divers Reasons may be added.

1. Mariners can attest, that such Waters as be somewhat brackish are best for long Voyages, and therefore they do often fill their Cask at Springs near the Sea, and even good Waters, by ayd of a little Salt may be kept sweet and saved longer than ordinary.

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2. Such

26 *Of Salt upon Sand embodied by the Sun.*

2. Such Springs as are offensive in smell, or that have any bad or corrupt tast with them, are no way better to be purified and cleansed, than by casting Salt into them, and generally Waters become more deadly and contagious, by their putrid and offensive smells, than by their Saltness.

3. Habitations on the very Sea-Coast, prove generally wholesome, the saltness of the water not tending to Destruction unless in the dead Sea, or Sea of *Sodom*, which engendreth no living thing.

4. Salt-waters themselves are most fruitful, neither is there any place in the World, where that generative virtue doth more abound, or where there is more generation or Multiplication of Creatures than in the wide Ocean.

5. Certain Plants and Fishes prosper best in the Salt waters, as Samphire, Flounders, Place, Mulletts, Eccles, Oysters, and divers other sorts.

In the Brine-Ponds of a Salt-work. And in *Xantoign*, (saith Sir *H. Plott*, besides what is before mentioned,) is an Herb from which is extracted *Sal Alkali*, another called *Salicor*, whereof beautiful Glas is made.

Also Wormwood with this property, that if one do Boyl the same, and with the Decoction thereof temper a little Meal and make it into Past, and fry the same either in Lard or Butter, and Eat thereof, it will expell all such Worms, as are either within the Bodies of Men or Children, which the Author did not understand till he had six Children Dyed of the Worms, as he manifestly perceived in Anatomizing their Bodies, as also for that oftentimes they voyded them at their Mouths, and when they were drawing to their end, these Worms would issue at their Mouths.

6. Rain-water hath a more frigidifying virtue and Saltness in it, than fresh River or Spring water, hence the Clouds are said to drop Dew, Prov. 3. 20. The Lord in *Amos*, 5. 8. and Chap. 9. 6. Declareth, *it is he that buildeth his Storees in the Heaven, and hath founded his Troop in the Earth, he that calleth for the Waters in the Sea, and powreth them out upon the face of the Earth, the Lord is his Name*: According to his promise in *Deut.* 33. 28. *That his Heavens shall drop down Dew.*

Object.

Objections,

1. Brackish Waters are unfit to make Drink for Man's Body.

Answer, Nothing is more unfavoury in our Drink than Salt, because that our thirst doth naturally desire to be satisfied with that which is cold and moist, whereas Salt on the contrary is hot and dry, but hence it doth not follow that Springs which be somewhat brackish, are improper to water the Grounds.

2. To Man and divers other Land-Creatures, the eating of much Salt is very contagious, because it maketh the Blood Salt, and breedeth Barrenness in Man's Body, by the exceeding dryness thereof, and maketh our Seed or Nature too sharp.

Answer, Salt moderately used is stirring in our Bodies, it whirens, hardens, and favours all things, as Beef and barrel'd Cod, &c. Which causeth Vegetation, and gives good nourishment.

3. In Holy Writ we read *Judges the 9. 45. That Abimelech when he took the City of the Shechemites, beat it down and Sowed it with Salt.*

And the Psalmist, *Psal. 107. 34. Saith He turneth a fruitful Land into Barrenness, (Heb. Saltiness) for the wickedness of them that dwell therein.*

Whence it may be urged, that Saltiness is a principal means to make the Ground unfruitful, and the sowing of Salt thereon, bringeth forth Barrenness, and a Curse upon it.

Hence some humane Laws of our ancient Fore-Fathers seem derived: Namely, That all such Ground as became forfeit and Confiscate to the Crown, by reason of a high and Capital offence committed, should be Plowed and Sowed with Salt.

Answer, 'Tis granted, that to lay on too much Salt, through its corrosiveness it doth burn dry, and renders the Ground Barren and unfruitful.

And such is Mud Ground recovered from the Sea, till it be prepared for Tillage and Pasturage, as before is mentioned in page 22.

28 *Of the usefulness of Salt in rendering Land fruitful.*

On the contrary, Grounds that are wrought out of heart, are unfruitful for want of Salt, and Barren-Grounds are improved by Dung which is laid thereon, which could no way enrich the same were it not for the Salt, which the Straw and Hay left behind them by their Putrefaction.

This premised, the Author proceeds to give an Account

Of the moderate use of Salt in fertilizing Land.

1. **H**E adviseth, that they begin with small practises on arable Lands, before they proceed to Pasture or Meadow.

2. Not to overflow any Grounds already Sowed, or intended to be Sowed, with their Grain, but rather some waste Ground or other, which after it hath been glutted with Salt-water divers times, and then reposed it self a sufficient time, might serve instead of Marle, or other Dungs to spread abroad upon their Barren Corn-Grounds.

And this is so well performed, where there is not any artificial Observation at all made, to wit, at *Nampwich*, that any one that hath conferred with them about the same, may effect the like in any parcel of Land, bordering on the Sea, or any Arm thereof.

Yet the Brine of those Pits, yields one third, or one fourth part Salt, whereas the Sea water doth not for the most part contain above an eighteenth or twentieth part of Salt, which is a great disparity, but that much Land water is also Laded out of these Pits with the Brine.

More particularly to fertilize ground with Salt, the Author directs, that before the Ground be Sowed, there be mingled two bushels of Bay-Salt, amongst two bushels of Winter-grain, and disperse them together on the Ground, and you shall find a good increase of Corn, and the Land it self much bettered and cleared of Weeds, as he hath been credibly informed.

Palissy a French-Man affirms, that Salt doth cause divers places about *Rochel* to be fertile.

Mark

Markham, an experienced Husbandman, prescribeth common Salt, always to be mixed with the Grain, for obtaining incredible Crops. Lastly, The Lord Bacon, whose Authority is of good credit with us, attributeth fertility to Salt.

After the Bank is made, and the Land well recovered, dwelling Houses for the Owners and Salt-Workers may be Built, near to the Bank, the better to Watch, repair and secure the same, and to save charges in the Carriage of Goods more remote: Nor is a Habitation just next the Sea unhealthful, as is evident from many places on the Coast, as *Hastings, Rye, Deal, North-Yarmouth, Whitby, &c.*

4 Of the making of Brine-Pans, and Brine.

Suppose the level Ground aforesaid be divided into square Partitions, like Earth-beds in a Garden, or like three rows of square Trenchers.

Three of them are called a Rank, to wit in the Figure adjoyning, W is called the Water-Pan, 2 the Second-Pan, and S the Sun-Pan, and so in the same piece of Ground may be made as many Ranks as the Dimensions thereof can admit.

S	S	S
2	2	2
W	W	W

Each of these may be two Rods or Poles square, with Ridges of Sea-Clay between each, for a Man to walk upon.

These Pans must be smooth and Level, to be floated alike all over, to accomplish which, Water it self designs a Level.

These are made such, by Men walking on them with Boards tyed to their Feet call'd Glib-Boards, who with Iron Rakes break the Clods, and with Wooden Rakes like Kennel-Rakes, or Boards of about 2 foot long, smooth the Ground, which is moistned with Water.

On the outside of the Water-Pans, is a little Channel of Sea-water, derived from the feeding-Ponds, that lye upon higher Ground.

Out of which Channel, after the Water is settled, and the Pans seasoned, each Water-pan is filled about three Inches deep with Sea-Liquor, where after it hath been exposed to the

the

the Sun and Wind in a fair hot Summers day, two Inches of it may be derived into the second Pan; and after it hath likewise been exposed there, one Inch of it or less is to be derived into the Sun-Pan.

The transferring of Water or Brine from one Pan to another, is performed by a Man with a little Paddle as broad as the Palm of a Mans hand, with which he turns out a Clod that opens a passage for water, from each Pan to the other, and when the Liquor is run, puts it in again, with cemented Mud.

A skilful Brineman will govern and direct 3 or 4 Labourers, he may himself Earn 8 s. a Week, and in Harvest weather more: One skilful person, can mannage and look after 60 rank of Pans.

On the out side of the Sun-Pans, is a little Channel made to convey the Brine (in common from them all) to a large Pan, any where conveniently Seated, called the Common Sun-Pan, which may be so deep as to be filled 7 or 8 Inches with Brine, where it may remain mellowing from 6 to 24 hours, or till the Liquor bears a Hens-Egg new laid, till it floats above water the height or breadth of a Threepence or a Groat, or till it be so strong, that the Egg lies along in it half above water,

Here it may not be improper to intimate, that the ingenious Mr. *Richard Walker*, chief Gauger of the Excise Office, besides his other Qualifications, hath great skill in Glasses, and Glass-Working, and hath invented a Glass, with a liquor in it hermetically Sealed, which doth by its depth in swimming in Wort-Liquors, and Wine, determin the strength thereof, which doubtless might be properly applied to Brines.

The Brine in these Pans being found of a sufficient strength, is from thence derived by Channels or Brine-Currents to those Ponds called Cisterns, where the Rain and the Sun breed red Worms, that cleanse and purify the Liquor, where it ripens or mellows by Age, and grows the more fit for Boiling; Old Brine far exceeding that which is New: Between the Cistern and the Tiled Brine Store House, there ought to be Pipes under Ground, to convey the Brine from the former into the latter; In which pipes there are Stop-Cocks, and

and other Pipes let into the former, from whence the Brine of either, as shall be thought fit, is to be pumped up by Windmill-Pumps that have Crankes like the handles of Wimbles, and conveyed by the latter Pipes to Wooden Clearers, (like Brewers Fats or Coolers,) at the Boyling-Houses.

In Mr. *Alcornes* work near *Portsmouth*, is a notable Windmill-Pump, that raiseth the Brine about 24 foot high, to wit, Pipes go away from the bottom thereof, which is not above half a foot under ground, in a declivity, or leaning on one side to the Pipe in common between the Cistern and the Brine-Store House, and so the Pump doth from either raise it about 12 or 14 foot on one side, and forceth it 10 or 12 foot higher in the former Pipes, continued on the other side to the Clearer at the Boyling House: The foot of the Windmill Pump, resting in and moving round in these Pipes, with two Cleppers on each side, to keep all Liquor drawn up from running back, that when the one is open, the other is shut,

And here perchance it may not be improper to mention, that Sir *Samuel Moreland*, hath lately invented an Engin, that forceth Water in a continual Stream, without Statts, much higher than the Banqueting House at *Whitehall*, and the like at *Windfor*, above the Castle, to his Majesties great satisfaction, and his own great Renown.

The querie may be, whether the same be not Applicable, to the conveying of Brine from one place to another?

The Brine raised by the Sun as aforesaid, proves better than any natural Brine of Pits hitherto known, most of those being either too weak or too strong, and not mellow with Age; yea and better than any Brine made by melting of Forreign Salt in Sea-Liquor.

The shallow Pans aforesaid in Rainy weather in Summer, are kept floated, to preserve their bottoms, and in Rainy weather in Winter, are left open, to be washed clean, and made hard by the said Rain, to carry away the Flip, or Slime in Currents: And in *March*, or *April* following, 'tis usual to cleanse the said Pans, and for preparation, to float them with no more Salt-water, than will wet them.

There will grow in these shallow Brine-Pans, Samphire, of a far more excellent kind and tast than that, that is gathered from

from Rocks in the Sea, and such as is by some Physicians much coveted for the cure of certain Distempers.

In *Staffordshire*, and other places, are Brine Fits that yield a Liquor so weak, that a Pan must be thrice filled, and Boyled half away each time. before it be strong enough to Boil for Current into Salt.

Were it improper to try, whether the said Brine might not be ripened on Clay, &c. Or on Mats by laving as in page 7, and thence measures taken, to avoid so great trouble and expence of Coals in the Boyling?

5. *Of Salterns or Boyling-Houses, Grates, Furnaces, and Iron Boyling-Pans, with the Art of Boyling of Brine.*

A Boyling-House is called a Saltern, and ought to be Built near to the place from whence the Brine is to be supplied, of a size suitable to the number of Iron-Pans, that can be there employed.

These Houses are but one Story-high, of Stone or Brick, and so thatcht up to the Top, (like Barns,) but must be left a foot open in the Ridge, for the steam of the Boyling-Liquor to pass through.

Each Boyling-Pan will require a Furnace, and a Grate under it, but yet one Brick-Chimney passing through the Thatch, will serve to Convey away the Smoak of the Furnaces of two Pans.

The Fireplace under the Boylers, or Boyling-Pans, is built with Brick, square, sloping on each side like a Ridge or Millers Tunnel, at such a height that a Grate may be plac'd 3 foot above the Ground, and the Boyler two foot and three quarters above the Grate.

The sloping abovesaid is to be such, that the Grate may be three foot and a half long, and three foot broad.

This Grate is to be made of wrought Iron, the Bars in length according to the Dimensions above, in thickness and in breadth alike, to wit an Inch and a quarter, each of them

to stand asunder near half an Inch, and to have two or three Bars athwart under them, to support them all.

The Ground under them is to be the Receptacle for the Ashes and small Cinders that fall from the Grate, and is to be Arched up like the Mouth of an Oven, that the Fire on the Grates may draw the more vent.

The Grate is to have an Iron Door, at which it is supplied with Coals, and on each side another little Iron-Door, called a vent hole, which Doors are to be opened or kept shut at pleasure.

Of Boyling-Pans.

These are either made of cast Iron, or wrought Iron; those of cast Iron, may be 7 foot and a half long, 5 foot broad, and 9 Inches deep.

This sort of Iron is made in *Sussex, Hants, &c.* Of it are likewise made Iron Guns, and Backs of Chimneys, and it is much cheaper, and fitter for this use than wrought Iron, in regard it will serve at any time to make Bar-Iron, and is not devoured by rust, as wrought Pans are, being as good as Sow-metall.

Some Pans are cast in four pieces, which must be rivetted together with Bar-Iron, and the Holes and Cracks stoppt up with Putty, and the like is to be done when a Cast-Pan Cracks.

To cast a Pan, to wit, Bottom and Brims, all in one piece is a Mystery; some that have attempted it, have failed in the success, the Air in the running of the Metal, making a hole through the bottom of the Pan, which indeed is at the Surface or top of the Sand. But however it may be thus effected.

Lay two wisps of Pease-straw cross one another, a hands breadth under the Edges and bottom designed in the Sand on which the Pan is to be cast, so that their Ends may come into the Air above the Sand, in which the bottom after the manner of Plummers is supposed to be turned upward: The Iron when it runs, will press the Air, and make it force

a passage with a huzzing noise through the Wisps, avoiding the inconvenience aforesaid.

And Founders affirm, that besides Kitchen Pots, other large Iron Pots are cast at *Bromwicham*, and at *Pool-Bag-Mill*, within 8 Miles of *Covenry*, and at other places for the use of Metal Men: And here at *London* at *Tower-Hill*, are to be seen deep round Iron Pans capable of holding more than a Hog-head or two, with knobs on their sides to support them, all cast entirely at once, said to be made for the use of Soap-Boylers, and for the refining of Sugar, Salt-Petre, &c. and are cast, possibly, after the manner of Bells with a vent at the bottom; and one of the Founders Servants alladgeth, that shallow cast Salt Pans may be made by them after the same manner, of such fitting Dimensions as shall be thought convenient.

A Pan of the Dimensions aforesaid all in a piece, may weigh about 20 C. or a Tun.

Wrought Iron is made in the Forrest of *Dean*, and comes from *Bristol*; 'Tis said to be wrought, because 'tis refined at the Forge, with much Labour and Cost, and not only made into Plates of divers sizes, but likewise into Bars for Wheels, Nails, Locks, Horseshoes, &c.

Boyling Pans are likewise made of this Iron, to wit, of Plates 20 Inches square, which are thicker in the middle by a quarter of an Inch, than towards the Edges; These are Rivetted together till they make a bottom of seven foot and a half, or eight foot square.

The Plates or pieces of the Brims, which may be had of any competent size, are thought convenient to be two foot and a half long, and about nine Inches high. All the Chinks and Clefts are as aforesaid to be stoppt with Putty.

A wrought Pan of these Dimensions, may weigh about 7 C. or 8 C. weight Averdupoize, And according to the Workmanship, be in value from 25 to 30 l. sterling of current Money, which is about 4 or 5 times as much as one of the cast Pans aforesaid, of above twice or near thrice the weight.

Of the manner of making both cast Iron and wrought Iron in the Forrest of *Dean*, see *Philosophical Transaction*, N^o 137. where the cast Iron is said to be so very brittle that being heated, with one blow of a Hammer it breaks all to peices, quite contrary to the nature of good wrought Iron.

But

But this asperion on cast Iron is far from being generally true.

Of the Boyling of Brine into Salt.

First, 'Tis supposed (as aforesaid,) that the Brine is by a Windmill-Pump conveyed into large Wooden Vessels, standing adjacent to the Boyling House called Clearers, for shape resembling Leaden Cisterns, Chests, or a Brewers-Coolers. These Vessels if exposed to the Air, as commonly they are, may sometimes entertain Rain-water, but not long, because they are perpetually filling with Brine, and running by pipes of 3 Inch-boar, (which may be stoppt at pleasure with plugs like Spickets,) into the Boyling House, where it is received and conveyed by little Troughs into the several Boyling-Pans, where this Rain-water is soon Evaporated in the Boyling: The bottom of these Vessels, (to render them secure from Leakage) are Calked like the Decks of a Ship, And they must be placed as high as the Brine may run in a free Current to the Pans as aforesaid.

And now supposing the Boylers to be properly seated and cemented about with Morter over the Fire-place, to keep in the heat and smoak, and then filled; the next thing is to kindle the Fire, which may be done with such large Sea-Coal as will both cake and flame, such are known by breaking and tryal in a Forge, and the small are thrown in at top by degrees, to maintain the Fire, which may be done as well with Peat where it cannot be had.

If the Brine be strong, the Pan need not be quite filled.

After a vigorous Fire has been maintained two Hours or more, and that the Liquor begins to hew, and is ready to kern or granulate, which is known by a little Cream or Scurf at the Top, then it is time to skim, which is done by raking the frothy surface of the Liquor to a corner of the Pan, from whence it is skim'd off and put into Tubs like Ale Tubs, with a Tap at the bottom, that after a standing or settlement, the Liquor or Brine at the bottom may be drawn off, to serve again.

The quantity that may come off from a Pan, may be four or five gallons, but in boyling up or refining of *French Bay Salt*, the dirt and scum is exceeding much.

The next thing to be done is to separate the Sand, All Brines whether of Pits or made of Sea Liquor, or by melting of Foreign Salts, in Boyling petrify and yield a Sand, which cannot be conceiv'd to be in the Liquor before boyling: For a strong Brine hath been dreyn'd or squeez'd through most pure Holland of eight foldings, and no symptom of any Sand was left remaining.

The Pan boyling violently in the middle, this Sand is cast outwards towards the Corners, where in *Cheshire*, and *Worcestershire*, they place small Iron Pans to receive the same; But it being found by experience, that this Sand will fall to the bottom of the Pan before the Salt pree pirates, it is with a Board-Rake, Raked to one corner of the Pan, and then taken out with Ladles and put into Wooden Vessels called Pots, like Wheel-barrows, open at one end, which are placed upon Stands or Beams under the Clearers. This Sand is pure white, and resembles a massy Snow-ball, and being dug and stir'd, there will run away Brine from it, to be reserved in a receptacle underneath, for further boyling.

This Sand will naturally cake to the bottom of the Pans, and is admitted so to do every boyling, till the same be smooth and fit for the Rake.

And much of it that will stick to the sides is forced off with a driving cutting Hammer, once at least in three weeks, and is made use of for Clods, and Ridges between the shal-low Brine Pans.

A Pan may yield two or three Gallons of this Sand, if the Brine be new and foul, which being removed, to make the Salt, hitherto swimming and floating in the Liquor, precipitate or fall to the bottom, shut the two Vent-holes near the mouth of the Grate and the Door thereof, and then the smoak for wapt of Vent stifles and puts out the Fire; And after 12 hours time the Salt will be saln to the bottom and become hard, and there will remain a Liquor at the top, which being boyled away or continually Evaporated renders more Salt.

'Tis usual to keep Boiling all the Week Days and Nights from Monday Morning to Saturday Noon, and then put out or stifle the Fires as aforesaid, till Monday, and proceed as before.

Were there no other Method, this were in effect to lose much time and give over Working. To prevent which, in *Cheshire*, &c. to make the Salt precipitate and fall to the bottom, they use Eggs, Blood, Ale, but after much experience the Remedy following was found out, not only to make the Salt sink, but likewise to harden the same.

Take Ox (or Stags) Tallow well refin'd, and melt it, and put it into Lees of Wine, the like quantity in weight or measure of each: And this is a good proportion for old Liquor. But if New, there must be less of the Lees and more of the Tallow.

After the Skimming and taking out the Sand, And that the Fire hath been stopt till the Liquor becomes quieted, then use the said Composition of Ox-Tallow and Lees: To wit, take the quantity of a Nutmeg of it at the end of a Lath, and turn it round about on the surface of the Liquor, till it be spent, Then after 2 hours at most, open the Vent holes or Doors, quicken the Fire, and Evaporate or boyle away the Liquor, and you will have the Salt lying as it were in a puddle at the bottom, made and fit to be removed. Now to save the Pans from cracking or burning, they throw on fresh Coals and shut the Door and Vent holes of the Fire place, and the Fire is again stopt. Then the Salt is to be raked up to one side, taken out and put into dreynng Cribs, which are made like Hay Racks, with loose Ribs on each side to take out, that stand so near to one another, that there is but room to put in a Milld-Crown or half Crown, where after it hath lain dreynng in the Boiling-House the space of 6 or 8 hours, it is a pure hard kernald Salt, and may be removed, but yet will continue dripping three Weeks or more, and in the event with Age, (unless often moved) will become Rocky.

The Liquor in the Pan which is placed a little inclining towards one corner is called Bittern, which (all but a little to keep the Pan from burning,) is taken out and dreyned away with the Salt, and the Pan immediately filled with a
fresh

fresh supply of Brine, for another Boiling. And then quickning the Fire proceed as before.

In 8 hours time a Pan of Brine of a moderate or fitting strength will be compleatly made into Salt, with the expence of one Bushel and a half of Coals, which will make a Pan of Salt, from two Bushels and a half of Salt, to four or more, according as the Liquor is in strength and goodness.

Five Men can attend 12 Pans, 4 of them attend Day and Night, And their Wages is about 11 shillings a Week, the fifth attends only in the day time, and his Wages may be seven shillings a Week or more.

The Liquor that Dreyne from the Salt in the Cribs, is a strong sort of Bittern, which is received on a Board underneath, that lies in a Channel or waft Current, that conveys away the Dreynings or Bittern into the Sea.

On this Board will fall some small or thin Salt, which after it hath layn and dreyned is saved, to heighten weak Liquor.

A Pan may yield from one Gallon and a half, to three or four Gallons of this Bittern, according to the season of the Weather the Brine is made in.

The Ashes being rich with dust of Coal and Cinder that will burn again, are used to make Lime withall, And though not ordinary or commonly known, yet is praised at the Lime Kills near *Bristol*.

And now the Reader sees what is meant by Sand, Dirt, and Bittern, it is fit to give an account of the mischeivous effects thereof, in all Salts incumbred therewith: And such are all Forreign Salts made meerly by the Sun, as *Spanish*, *Portugal*, but most especially *French Bay Salt*. To wit,

1. The Sand, Dirt and Bittern, help to fill up near half the Measure,

2. The Dirt is so drawn into Flesh, and split Fish, that washing will not get it out; And this causeth the Fishmonger to pare his Cod, to make it look white like *Dutch-Cured*.

3. The Bittern in Refining of *French Salt*, is a Liquor separated from it, that resembles Sack in Colour, but Gall in Taft: It will naturally Embody in the Sun, and become a sub-

Substance like Salt: It may be brought to a Spirit more vigorous than Aqua Fortis, that will suddenly dissolve Cast-Iron, Silver, Gold, or any sort of Metal.

Its Vicious Effects are, Namely,

As to Flesh,

BEsides in general a bad Taste, or a good Relish destroy'd, the Moisture, Gravy, and Nourishment, in a little time is rendred as Salt, as Salt it self. Hence the Flesh becomes hard, afterwards very bad or unfit for Food, and at length is mortified or rotten.

As to Fish,

The Moisture and substance of it is so consumed that it becomes Rotten, and will not keep above six Weeks time in a hot Climate, as the Fishmongers alleadged before a Committee of Parliament.

The Consequences whereof, are,

IT causes Scurvies, Consumptions, and other acrimonious Diseases, in the Bodies of Seamen, or Soldiers in a besieged Garrison, that are compelled to the frequent and long use of it.

As to the Sand begot in boyling of Brine, a most skilful Person in Glass, is about to make Experiments, whether it may not be of use in making of a most pure sort of Glass.

And as to the Bittern, the Honourable *Robert Boyle* Esq; hath made sundry Experiments with it, which we hope he will in due time make publick.

Moreover a learned Doctor of Physick is trying if the same may not be of use in Dying, and if it be mingled with Spirit of Wine 'tis said to be of good use in keeping of a Corps, or Flesh, long from putrefaction: Bittern will

Em.

Embodiy in the Sun, and make a Body like Salt but useless.

If a Pan full of it be under boyled, it will all evaporate: *Heshire* Salt-Workers call the Liquor that drops from their Salt, being put into Wicker baskets, Leach Brine, which if boyled will speedily make a strong Salt, but they commonly mingle it with other Brine to hasten the boyling thereof. They deny that their, and *Worcestershire* Salt, is incumbered with any Bittern at all, and 'tis granted not with much, in comparison with other Salts, but it must also be affirmed, that the fierce fiery and correvile Nature found in their Clod and Loaf-Salt, (like Sugar Loafs) is occasioned, by a plenty of Bittern in them.

Of Bay Salt.

OF the Art of making thereof see *Transaction*, N^o 51. wherein it is described to be kernal or granulated in the Island of *Rhee*, (to which we also add the Islands of the Province of *Xantoigne*,) on Marthes or Sea-Mud by the meer heat of the Sun, in shallow Beds or Mud-Pans of about 15 foot square, and an Inch and an half deep, which are filled from Ponds derivative one from the other, of 20 and 10 Inches deep, and so gradually decreasing, thereby to convert Sea-Liquor into a strong Brine, that will kern in the Sun, after the manner of making Brine at *Lemmington* and *Portsea-Island*, before described, (which yet will not granulate without Boyling) and on the same kind of Ground, which is said to be a fat Earth neither sandy nor spongy: If the Earth be Red it makes the Salt Grey, if Blew the more White, of the size of a Pepper-Corn, but of a Cubical shape.

And dry hard Salt of the like size, but free from Dirt and ill Qualities, is commonly made in *Portsea Island* and *Lemmington* aforesaid, and it is true both of that Brine and Bay Salt, (which is also made in the Isles of *Xantoigne*) that they can make more and better in Windy than in Calm Weather.

Both *Portugal* and *Spain*, being hot Countries, yield Salt made after the same manner or on Sand, as at *Ferbo* in *Barbary*, the Isle of *May*, &c. before mention'd.

Salt so made is laid a drying on Beds of Straw, and great heaps of it Thatched and covered over to keep it from Dews and Weather.

As to the Salt of the Isle of *May*, of which we have spoke before, the use of it as to *Herrings*, was long since Prohibited in *Holland*, the *Dutch* having found by experience likewise that *Bay Salt* was too big to be used about Butter and Cheese, discoloured the same, and Codd, did not dissolve soon enough thereon, and was improper for *Herrings*, did (it may be presumed for the three abounding ill Qualities of it, to wit, Dirt, Sand, Bittern, before insisted on,) forbid the use of it by Law, as appears by a Book Published by *Simon Smith* Agent for the Royal Fishing in 1641, in *Quarto*, Intituled, the *Herring-Buss-Trade*, expresse in sundry Particulars, both for the Building of *Busses*, making of deep Sea Nets, &c. With the manner of catching and curing the *Herrings* for Forreign Vent, together with sundry Placarts or Orders of the *Netherlands*, for the better Government of the said Trade.

In one of them of the 30th of *Aprill* 1632, the States of *Holland* and *Westfreeseland* acknowledge the said Trade to be one of the principal means of the happiness of those Countries, and the Regulation and Care of such Trade to be the cause of such Order.

The which being well known and considered, some few Years before his Majesties happy Restauration, an Undertaking was on Foot, to encourage and set up a good Fishery here, the which in the time of *Oliver's Usurpation*, &c. miscarrying in the Womb, and his Majesty coming in not long after, fresh Collections and Endeavours were on Foot, to Renew, Propagate, and Enlarge such Design, and a Committee of his Majesties most Honourable Privy Council appointed to that purpose, and at divers meetings of the Privy Council, Affairs of that nature Debated, particularly on the 17th of *November* 1663, his Royal Highness the Duke of *York* being present, Sir *Richard Chiverton*, Sir *William Batten*, and Sir *William Rider*, were by his Highness and Council desired to meet amongst themselves with whom else they thought fit, to draw up Proposals for the Advancement of the Royal Fishery; Pursuant whereto, they were attended by Mr. *Simon Smith* aforesaid, Mr. *John King*, and

58 *Dutch Laws prohibiting the use of French Salt, &c.*

Mr. Thomas King, with several papers of Proposals, amongst which one was.

That the *Hollanders* Laws and Orders about Salt, (and Fish) set out in the Book called the *Royal Herring Buss Trade* (aforesaid) should be printed, and the Fishermen to observe the same (till better could be agreed on,) The which having not been yet done, I humbly digest and tender as followeth.

The 28th. Article whereof is,

THAT no body from henceforward, shall dare to salt the Herrings with any *French Salt*, either *Scutlers*, *Olderdoms*, *Buone*, *Saint Martin*, *Bronage*, *Stright*, *West-India*, and the *Ile of May* Salt, upon forfeiture of the Herrings that shall be pickled or salted therewith.

The 25th. Article.

That no Steersman or others, from henceforwards may carry any Salt to the Sea in their Ships, for to salt Herrings therewith, but *Spanish* or *Portugal*.

Article 24th.

That no body shall put any *Spanish* Salt, or *Portugal* Salt in Chests, Cellers, or Barrels, before the same shall be Visited and Appraised by the Rate-Masters thereto appointed, on a penalty of 25 per Cent.

Article 25th.

The *Spanish* and *Portugal* Salt to be viewed by the Rate-Masters, before the same may be taken on Board.

Article

Dutch Laws prohibiting the use of French Salt, &c. 59

Article 26th.

The Steersman shall be bound upon the Command of the Rate Masters, to beat open by his Mariners, and to shut again the Barrells of Salt: The Ratemasters each time to have for their Appraisement and Visiting each barrel of Salt a Doyte, to be paid the first time by the Seller, and the second by the Buyer.

And by the 25th. Article.

If a Steersman shall have salted Herrings with Salt, not having been the second time Viewed as before, he shall forfeit 36 Guilders.

And by the 6th. Article.

The Steersman is to make Certificate of the Quantities of Herrings by him Caught garbished Salted and Packed on board, in due time, and delivered in the Place Appointed: To which, by *Article 25th.* he must also Certify that the same are Salted with good Appraised Spanish or Portugal Salt.

Article 27th.

And in case of the Rating of the said Salt, any Deceit were found to be done, in the Cask or Cellars, the Vender thereof shall forfeit 200 *Carolus* Guilders.

Article 30th.

The Steersman going for Herrings, shall be bound to salt the pure Herrings caught after *St. James's tide*, *Bartholomew-tide*, or *Crunx-tide*, whereof Men desire to pack Circle or Burnt, with small Salt Boyled of Salt, according to a Contract made with those of *Collem*.

60 Dutch Laws prohibiting the use of French Salt, &c.

Article 31th.

No body shall receive any such white or small Salt, but by a due Certificate from the place where the same Salt is made, upon forfeiture of the Salt. The Ship Master who brings the same Salt from the place where it is made, to certify the same Salt is not altered, nor to their knowledg diminished, since the time they took or received it into their Ships, and that the same is left in being according to the Contents of the Certificate, upon forfeiture of the Salt, in case the Ship-Master is owner thereof; and in case not, upon forfeiture of the value thereof, to be Recovered of his Person, Ship, and Goods, And that he moreover shall be punished for Perjury, according to the former Contract with the Deputies of Colleen.

The Dutch go as far as Sketeland, a Fishing towards the North of Scotland, and so following the Herrings to the Dogger Bank draw nea er home, where the Fish they Catch is to be Repacked, Viewed and Rated, before it be Sold and Exported, only some few Chafers or Drivers, not belonging to those Herring Fishers of Holland and West Frizeland, are allowed to go to Market with Fish between the 25th. of June, and the 15th. of July, and are called Summer-Herrings, which are to be spent presently, in regard they are very fat, and will not endure Repacking; here we may say that fat Herrings are kept better with refined Salt.

By the former Articles may be observed, how long they were each year permitted to use Spanish and Portugal Salt unrefined, and when to use refined Salt. And by the following Articles may be observed how careful they are to send the best Herrings abroad, and spend the worst at home, to wit,

By Article 3d. Fresh Herrings brought on Shore, are not to be fished for Exportation; by Article 32, no other pickled Herrings shall be carried into France, Flanders, or further Westward, but the Great Bank Brand Herrings caught and packt after Crux-tide, (with refined Salt as in Article 30.) Nor shall Herrings be carried to Bremen, Hambrough, Colleen, and other Places, salted with course (unrefined) Salt from

from bottom to bottom, these being as well full as shotten, to be sold for no other but sower and refuse.

And by Article 33. Packers, Coopers, Wharfmen, are prohibited to pack any course salted Herrings, either full or shotten from bottom to bottom.

From the premises it may be well inferred, That an Assay of Salt to be Established by Law, is in many respects more needful in England.

1. Because it is to run too great a hazard of Mens Lives, or Wellfare, to salt the Provision of a Ship or Garrison either with a bad Salt, or ignorantly. And the like may be said of a Fishery Enterprize, whereof small hitherto undertaken have miscarried through the badness of the Salt used.

2. Because there are more sorts of Foreign Salt Imported into England than into Holland, And why should not the like, are be use here as there.

3. Because there are some sorts of weak waterish Salts made bad in England, to save Charges, when they might be made dry and good.

4. Because the Virtues and use of the best sorts of Salt are known but to few, consequently little desired; And untill they are, the people are liable to abuse. And such an Assay might be a means to make them more known, at home and abroad.

5. Because for not knowing and using of a good Salt to cure Herrings on board at Sea, the Fishermen have been forced to sell them to their Hosts on shore by Contract to salt at so low a rate, that they could not live on it. Hence the Coast Towns became much depopulated and impoverished; hence much weak or ill salted Cod hath been dried and turned into Haberdine, that yielded but a very sorry Rate, in comparison of what it might have done.

The assertion as to Herrings is avouched out of a Printed Paper presented to Parliament called the Case of South-Town, alias Little Tarmouth in the County of Suffolk, one Article therein runs thus.

The Fisher cannot sell his Herring to any Man but his Host in greast Tarmouth, (which might not be used but only in the case of Merchant Strangers,) nor can he capitulate with the Host for price, but must take what the Host pleases to.

to give for them, by which means the Fishers oftentimes sees his Herrings sold before his Face to Forreign Buyers, for almost double the rate he receives.

And in case of a plentiful Fishing, the Fishers are forced to carry their Herrings to London, or other Ports at great distance, and thereby lose the rest of the Season of Fishing, or throw what they have taken overboard, that they may return to catch fresh for other Ports, because the Freeman of Tarmouth will not Buy them, and no body else may.

6. Because by corrupting an Officer, Salt may be Imported from Scotland, &c. under pretence of being made or refined in some place of England, And so the King lose his Customs.

7. Because Ship-Masters lie under a great Temptation to embease, and consequently embeziel and get corrupt Gain, the rather in regard the Laws that enjoin the regulating of Measures, are not observed in several Corporations and Maritime Towns, but illegal Measures maintained, and irregular ways of measuring practised.

8. Though its believed we need not have much bad Salt in England, yet without such course it will always abound: Moreover the keeping of Salt in Stoves or Hor-Houses, is to prevent its losing weight and bulk, whereas by the weight of Salt a good estimate may be made of its worth.

Upon experience, a Winchester Bushel of Portsea Salt weighed 67 l. of Worcestershire Salt, as in page 7. is alledged 56 l. And of Newcastle Salt, by the Lord Breretons experience 48 l. and in Cheshire there are several kinds doubtless much differing in weight, (the bulk being the same) of which I have no account, and if the weakest Brine there be thoroughly Boyled, it will (as some most skilful Saltworkers affirm) render a most pure excellent Salt.

*Other Arguments for Discouraging the Expence
of Bay and Foreign Salts, by imposing a
high Duty thereon.*

1. **S**uch Salts being granulated only by the Sun, abound with three ill Qualities, Dirt, sand, Bittern, of which see page 55.

2. Bay Salt was formerly Imported in *French Bottoms*, in regard the *French King* laid an Impost upon all Salt made in *Brittany*, and Farmed it out to such as were restrained to Import it in their own Vessels, who paid but 3 d. a Wey advance here, whereas *English Vessels* paid 50 sou'x a Ton there, by which means the Employment of our Shipping was prevented, and much Bay Salt (albeit prohibited) is frequently Imported under the Notion of *Guernsey Salt*, where there is but little made; under Colour whereof much rich Goods and Liquors are smuggled in, and Wool, Fullers-Earth, and Tobacco pipe Clay Exported, contrary to Law.

3. It is a great Impoverishment to the Nation to spend as we do, by a rational Computation to the value of 60 thousand pounds *per annum* in Foreign Salt, which is either paid for in Money, or Returns to that value prevented; whereas we can be furnished with twice as much of our own as we can spend, in regard some of our Brine-springs are inexhaustible, and run to wast, and Salt making in many places is given over for 4 or 5 Months time each year, where it comes to pass that multitudes of poor want Employment, become a Burthen to the Parishes, or instead of being Consumptioners at home, are driven to Foreign Plantations to search for a Lively-hood abroad.

4. Bay-Salt is improper to cure either Herrings or Cod, in heap or in pile on Board, because much especially of the largest of it, though mingled with other small Salts, doth not dissolve soon enough to pinch and save within time; Hence the *Dutch* prohibited the use of it about Herrings. And we have reason to do the like.

64 *Arguments for Discouraging French Salt, &c.*

1. Because it will be a means to increase Fishermen, Seamen, and Pilots: For if by reason of a good Salt, which pincheth, peirceth, and saves quick, Fish be well cured on Board, the industrious Labourers will reap near double the profit, and need not be compelled to sell their Fish to be cured, to them that have assumed a power to set a price, which hath been so general a Discouragement that not one third of the Number go now from *Tarmouth*, the *Cinque-Ports*, and *Members*, as were wont to do. Hence our Maritime Towns are much depopulated, and both them and the neighbouring Countries impoverished for want of the Consumption, Trade, and Returns by them occasioned.

2. Because Fish cured with a good refined Salt, is not only more acceptable to the Market at Home, but to all Markets abroad, and is sold at near double the price our Fish cured with *French Salt* is sold at.

3. Divers of the Fishmongers Company, met together about *Christmas* 1678, to draw up and Represent to the Parliament the vicious Effects thereof, on our own, and on *Iceland* or *Northsea* Cod (and Herrings,) to the end, the Royal Fishery Company then about to dissolve by reason of Losses by the *French*, &c. might be encouraged, and a dispensation for Importing Stock-Fish might be obtained. The which being prohibited by the *Irish Act* &c. It came to pass that his Majesties Fleet and other Shipping could not at all be Victualled with Fish, or at least not till the Royal Fishery of the Nation was so Encouraged as to proceed and catch plenty of good Fish in the *North* and *Irish* Seas. The Argument or Plea then insisted on was,

That the Fishery Adventurers of *Tarmouth*, obtained by an Act of Parliament, 14 *Regis*, Intituled *An Act for the Encouragement of Trade*, high duties to be imposed on Fish salted or dried, caught or Imported in Foreign built Ships or Vessels, with promise they would supply the City of *London* and other places with good Fish, of the same kind, to wit, Cod, Colefish, Ling, Haddock, at moderate Rates, but have not done it; whence there was a want of those Commodities till such time as the Royal Fishery Company undertook the supply of the Markets in Winter time, at moderate Rates, when the *Tarmouth* Fishery ceaseth.

Hence

Hence the Fishmongers for home Vent, craved the Encouragement of that Company, or the taking off the said Clause in that Act, and another to the same purpose in the late *Irish* Act, otherwise the Markets in Winter-time, (the most seasonable for catching and spending Channel-Cod,) will be left without supply, and themselves Ruined, or exceedingly damaged in their Trades.

Alléadging withall, that such Clause as aforesaid caused the Fish of *Yarmouth* to grow exceeding dear, albeit old and ill cured. Of which they gave this Account; to wit, that at the end of *April* each year they set out their North-sea Vessels to *Iceland* to catch Cod, which they Salt with *French* and other ill Salts, whence it proves Dirty and many times bad, doth not sell in any Forreign Market except in *France*, or if it doth, with an ill Repute, as if *England* could furnish no better, and at a price cheaper by 20 per Centum than Fish cured with a proper Salt, and barrell'd up as the *Dutch* do: Hence it becomes over plentiful at home, and being mistaken for that which is well cured by the Royal Fishery Company, begets an ill Esteem here also, on a Commodity that deserves high Applause. Whereas if good Salt were used whether in Pile or Barrelling, they conceived the Fishery Trade of *Yarmouth* would quickly be much Enlarged, not only for Expence on shore, but for Victualling of Ships, for which *Iceland* Cod well cured is very cheap and proper.

To which Discourse we Annex,

A Narrative of the ill manner of making Red-Herrings at Yarmouth, imparted by Mr. Richard Alcorne, &c.

1. **T**HEY undertake not their great Fishing for Herrings till two Months after the oylie Summer Herrings arrive in the North, which have a rowle of Fat, and no Rows in them, which he beleives may be cured so as to dissolve for Sawce, in imitation of Anchovies; yea the very Pickle of them

H

Boyled

Boyled up with sawce hath given a good gust both to Fish and Flesh, resembling the tast of Anchovies.

2. The Herrings as soon as caught are thrown into the Holds of their Boats, and if not carried forthwith on shore fresh, are salted with Bay or *French Salt*. One scatters Salt with a shovel on the thick Heap, another turns them with another shovel, and so continue till salted enough for present Preservation.

3. When the Boat hath a sufficient quantity, the Master carries them on shore to his Host, and there delivers them to him, according to a price the Town sets.

4. Many of these Fish are bad, because the Salt is of such an irregular size, that the third part of it doth not dissolve in proper time.

The best of them are barrell'd up with Salt and Pickle for Exportation, and yet these as being salted with improper Salt, can neither keep long for hot Seasons or Climates, nor for very long Voyages, for the Bittern peirceth the skin, draws forth the Oyle and Moisture, and in length of time brings the Substance to a Mortification or kind of Rottenness, yea in a short time renders it dry and hard.

The worser sort or bad ones, (to prevent the loss of them,) are deesed over a Wood-fire, and are thereby dried and rendered Red, or Red-Herrings.

Some of these happening amongst Salt of too large a size prove sinking, and when they come to the deeze, drop from their Heads, and are afterwards tied taile to taile, till very home dried, and then are barrell'd up with the rest and sent to Market, which irregular covetous practise deserves an Assay, having been a great disparagement to the Trade, and most of them when they come to be Broyled and eaten, prove dirty coloured, dry, and by reason of the ill qualities of the Salt.

Those that are overdry and oversalted, will upon tryal of bending, either prove very stiff or crack.

Whereas 'tis conceived if good or well cured, vast quantities might be sold at home and abroad, more than now are, and become a staple Commodity of great use and repaire.

The

The Reader may easily believe these Assertions, in regard a barrel of Red-Herrings costs more, and yields less, by six or seven shillings than a barrel of white pickled Herrings.

To Remedie which Inconveniencies, it is asserted and proposed.

1. That the Herrings that Arrive in *August*, being more fat and oily than those that come later, are most proper to make Red-Herrings.

2. That these being caught at Sea, be immediately salted with the best sort of *English* refined Salt, and if caught far off barrell'd up, so as to keep for two or three weeks time or less, till the Vessel can Arrive on the Coasts, or in the *Thames*.

But if caught near, so as to be carried on Shore within six or seven days more or less; then they need not be barrell'd, but being first sifted in Salt to be laid in a lay, and Salt sifted thereon, and so for more lays one upon another, till they become a Heap or Pile according to custom.

3. That they be suddenly put into the Deese, and well or sufficiently Deesed, and they will be effectually redred Red Herrings, with all the properties of good ones. To wit, they will be well seasoned, comparatively fresh, red, fat, oylish, soft and plyable, so as to bend about the Fingers, without cracking or breaking.

4. Our *Yarmouth* Men may rather thank than reprove Mr. *Alcorne* for this Digression, he did it to prevent the loss of their Fishery, which may be supplanted by one in *Ireland*, where the *Scotch* Boats every year carry away from *Dublin* about sixty thousand pounds sterling for Salt and Herrings, as hath been made appear, long since to the Lord Deputy and Council, on which an Act was prepared, for the Establishing a Corporation for the Herring-fishing at *Dublin*, where and generally on the Coast the Fish being much larger, fatter, and arriving sooner than ours, are more proper for Herrings Red or Pickled; and by reason of their cheapness, may in time certainly subvert the Herring Fishery of *England*: We now proceed to argue against *French* Salt.

5. Bay Salt is improper to cure Flesh withall, because in time it renders the Mear dry, hard, dirty, rotten, and by reason of the Bittern in it, consumes the goodness or nutritional part of the Meat, as moisture, gravy, &c.

And this comes to pass not only from the ill quality, but also from the overlarge size of this Salt, so that about one third of it dissolves not in proper time, but continues so long a dissolving, until all with it, is almost as Salt as Salt it self; Hence excessive quantities of it must be used, whence great remains of it are wasted and found at the bottom of the Cask, which is not fit to be used again; yet in the Pilchard Fishery is thrown by for second and third uses, but being once wet with the blood of the Fish is continually wasting; near as much as if in use. Whence one Bushel of good Salt of a regular size, though one half dearer than *French*, will turn to a cheaper account.

6. The *Dutch* Mariners returning from long Voyages, look fat, healthfull, and fresh Coloured, because their Flesh and Fish is saved with refined Salt. Whereas on the contrary our Mariners feeding on Provision cured with Bay Salt, are scorbutick and incombred with acrimonious Diseases.

Objection.

. The Masters or Refiners may Alledge, that Foreign Salts may be cleansed of three ill Qualities, Dirt, Sand, Bittern, that is, by making Salt upon Salt out of them, after the *Dutch* manner; and that for want of such Salts to Refine, they and many Labouring poor People under them shall be undone, and that some parts of the Nation are too remote from Saltworks of our own, which caused their undertaking.

Answer.

1. Foreign Salt may be had from our own Plantations of *Antego* and *Jamaico*, as also at the Isle of *May*, *Tortudos*, &c. for fetching, or very little charge.

2. The Discouragement only, but not the Exclusion of Foreign is intended. To which it may be objected, To what end should we Trade in it then?

Answer,

Answer, The Dutch Traded for many Ships Ladings of it yearly, not to spend for their own use, but to furnish Northern Countries therewith, especially Sweden, where it seems by a late Gazette they had no Native Salt, but now of late have Discovered Brine-Springs. To promote the Exportation of it when here, all Duties levied on it ought to be Repaid.

3. *Spanish and Portugal Salt* beat to Powder, do not so much either discolour Butter and Cheese, nor consume the Gravy, Moisture, and goodness of Flesh and Fish as *French Salt* doth. Wherefore these Salts being better to Refine, and also procured in Barter, ought to have a less Duty imposed on them than *French Salt*, whereas on the contrary that pays but 1 s. a Wey Duty, and *Spanish and Portugal*, 1 s. 4 d.

The goodness of Salt made from Brine, raised by the Sun from Sea-Liquor, purged and embodied by Fire, asserted.

Such Salts as are made at *Lemington* at divers Works. and in *Portsea Island*, on the Works of Mr. *Richard Alcorn*, and Mr. *Pitts*.

Portsmouth it self stands on a peice of Land that probably was formerly an Isthmus, now an Island, of about seven Miles Compass, being Banked on shallow Places on the North side, and is called *Portsea Island*, which is entred by Land on that side over a Bridge called Postbridge.

On the Eastward part of this Island there is Land recovered from the Sea by aid of a Bank, about 3 Miles from *Portsmouth*.

Mr. *Pitts* hath a smaller, but the more Ancient Work thereon, Mr. *Alcorns*, is a Work on 80 Acres, part of 300 Recovered from the Sea about the year 1666 : And though all these Salts (if there be good care and skill used in Boiling) may be alike or near alike in goodness, yet having had most Experience of Mr. *Alcorns* Salt, we shall give it no more than its due praise, and he deserves no less, for imparting the former Discourse about Banking the Ground and making Salt

Salt thereon, fit for all Intents and Purposes, which is proved from the Qualities and Effects thereof.

First, from the Qualities thereof.

1. **I**T granulates or kernes to any fitting desirable size, small or great, and of it are made Clods or Sugar-Loaves, And on one part of the Ground, is made a reddish Salt that serves to salt gammons of Bacon and Neats-Tongs, and renders them Red.

2. It hath also the properties of good, Namely it is white, hard-kerned, weighty, a (*Winchester* Bushel of it weighed 67 l. and an half, Averdupoise,) dry, and so keeps in moist weather, and grows Rocky, of which there is an instance in the Warehouse of the Royal Fishery Company at the Red-House at *Depford*, where for two years together hath been Lodged about 26 Wey of it; which, when occasion came to use, was found a hard Rock, and picked up with Pickaxes.

3. It is free from Dirt and Sand, and that drying, burning, corroding, mortifying quality, called Bittern

Secondly, from the Effects.

AS to Flesh, the ordinary method of salting Meat for long Voyages is hereby altered, rendered more speedy, and less chargeable, and the Meat much better and longer preserved. Of which methods hereafter, in Directions for using this Salt.

This Assertion is confirmed by manifold Experience.

1. Mr. *Pitts* Asserts, he furnished Sir *Dennis Gauden* late Victualler of his Majesties Navy, divers years with this kind of Salt, which cured the Provisions without any blemish or Complaint.

2. Mr. *Alcorne* Asserts, he will prove before a Committee of Parliament when needful, that the Provisions for the Navy at *Portsmouth*, have been excellently well cured with this Salt.

3. He

3. He asserts that *Irish* Beef and Neats Tongues have been salted two years therewith, and then Eat better than they could have done, if they had been salted but two Months with any corroding or waterish Salt. Also that it hath cured Salmon for long keeping.

4. About three years since, two Hogsheads of Beef, and two of Pork, were salted at the Victuallers Office on *Tower-Hill* with this Salt, according to the new Method. And that the Brine in the Cask being often proved, was from time to time found very good, and consequently the Meat the like, but of this I expect a better account hereafter.

5. How well it hath cured Bacon and Pork that was sent up to Mr. *Binglos*, Merchant in *Abchurch-Lane*, hath been before mentioned in page 11.

Divers Bacon-Men of *Kingston* and *Hants*, that used to salt Beef, Pork, and Bacon, with this Salt; about three years since attested the goodness of it, before a Committee of Parliament for the Fishery, whereof Sir *Henry Ford* was Chairman, and if it were needful its goodness might be attested by some Cook, and by divers Butter-women, Bakers, and a Deluge of others.

6. Beef hath been salted with it for an *East-India* Voyage, carried thither, and at 20 Months end brought very good back, whereof four Hogsheads was Sold to one Mr. *Robert Forth*, for a *Barbados* Voyage. Of this one Mr. *Parke* is ready to give Testimony when needful.

To Experience, Reasons may be added, why Flesh Salted with this Refined Salt, is cured with less Casualty, will keep longer, and be more valuable and acceptable, in hot as well as in cold Climates, than that Cured with French Salt or any other not Refined.

1. **I**T is cured with less Casualty, b. cause in the new method of Salting and Packing, hereafter described, the Brine makes the Salt packed with the Meat, search all places neglected on hasty dry Salting. Whereas in the ordinary or old method, the moisture of the Meat and Brine running away, there

there may happen the loss of Salt from many Concavities, before it hath had its desired Effect, although it lies till some parts of it be oversalted. And if one pound of tainted Meat happen in a Caskful, it will by the Brine be communicated to every part, and so the whole quantity to the sense of smelling be rendered corrupt.

2. It will keep longer, because this Refined Salt is Balsamick, and free from the Drying, Burning, Corroding, Mortifying quality, so often formerly mentioned and called Bittern, the spirit whereof will dissolve the Bodies of Animals, Vegetables, Metals, and therefore unseparated (as it is in all Salts embodied by the Sun) causeth Meat long salted therewith to seem rotten, and will so far embase the best stall fed Beef, that Grout or course Bread will be more healthful and strengthening Food than it.

3. That Burning Corroding Quality consumes the most nutritive part of the Meat, namely the Juice and Gravy, and succeeding in the room thereof, enflames and corrupts the Blood, whence ensue acrimonious humours, and Diseases in the Body.

4. Meat salted with this Refined Salt is more acceptable, because it hath its natural moisture, its pristine size, proper Taste, and genuine operation, and is not damaged by much more Age than the longest of Voyages can require, if kept constantly in good Pickle, or dry Salt; Neither doth Meat well saved with this salt, grow very much the saltier for long keeping.

As to Fish. First Herrings.

1. **T**He Royal Fishery Company have caught some thousands of Barrels, and salted them at Sea with this Salt, the greatest part of which were sold in *Holland*, by *Mr. Panfer of Rotterdam*, and the rest at home, and never any of them were yet complained of, as ill salted or cured: Yea being salted at Sea as soon as caught with that little Blood they have, do not Eat near so salt as those salted, and repack't with *French Salt*.

2. *Mr. Binglos* a Merchant in *Abchurch-Lane*, put some Herrings that were caught at *Michaëlmas*, on Board a Ship in

in *May* following, which carried the Right Honourable the Earl of *Carlisle* first to *Barbados*, and afterwards to his Government of *Jamaica*, His Lordship tasted the Herrings near the *Barbadoes* and liked them so well, that he was pleased to give an account how well they proved, and to direct his Secretary to put him in mind to write to his Majesty to give encouragement to this kind of Salt; part of the Herrings were carried to *Jamaica*, where after 6 or seven Months they were spent by his Lordships Servants, and were as good as any whatsoever, and esteemed a Rarity.

An Objection was made at a Committee of Parliament, that no Salt whatsoever would preserve Herrings and Cod for above six Weeks time in a hot Climate; But this instance, and considerable quantities that the *Dutch* formerly Shipt off to *Brazile*, and thousands of Barrels of split-Herrings and Mackarel yearly Shipt from *New-England* to the *Barbadoes*, and there sometimes kept two or three Months before spending, and *Berwick* Salmon that kept good to the *East-Indies*, are a sufficient Answer to the Objection as to both sorts, in regard Herrings require a better Salt than Cod.

3. The said Mr. *Binglos* kept Herrings two years, ending at *Michelmas* 1680, that were caught by the Royal Fishery Company, which so long after proved most excellent good, tender, and not over Salt. At length his Maid thinking that her Master did not regard them, gave them away to poor People, having no precept to the contrary.

As to Barreld Cod.

THAT which the Royal Fishery Company caught at Sea, they salted with this *Portsea* Salt, and sold most of it to the Fishmongers Company, who will attest when it is needful, that it was as well salted, white and good, as could be expected, and desired the Fishery Company to use no other kind of Salt, which they would not be drawn to, albeit they might have it much cheaper.

Arguments for the Encouragement of English Salt, and hindring the Expence of Foreign.

1. IT will Employ multitudes of poor Labouring People, in Recovering wast Lands from the Sea, in Banking

74. *Arguments for Encouraging the Manufacture of Salt.*
or Enclosing the same, in making and boyling of Brine, whereby they become Consumptioners of our Native Commodities, and be enabled to pay Taxes towards a necessary War if such should happen.

Whereas, as the Case stands, thousands have quite given over, or Work but half the year, for want of Vend, and by such means are forced away to the Plantations, live on the Alms of the Parish, or are compelled to Beggary or worse.

2. It will Employ many Smiths, and consume much Iron for Pans and Grates.

3. It will Employ many Carpenters, Smiths, Brick-makers, Brick-layers, to Build and repair Houses and Furnaces, and to make Carts, Barrows, and Cribs to remove away and store up Salt in.

4. It will Employ much Shipping and Mariners to fetch Coals, and to transport Salt, and consequently increase our strength in Mariners and Shipping.

5. It will Enrich the Nation, by preventing the needless carrying out of Money, to pay for *French Bay Salt*, and other Salts, which formerly in time of War in the years from 1627, to 1630; was sold here from Eight to Ten shillings a Bushel, whereas our own being a Native Commodity will be always at a moderate price. And albeit it should be dearer than Foreign, yet as aforesaid a much less quantity will serve to better purpose.

And both then and since many Ships went yearly in their Ballast to fetch Bay Salt, but of late since we obtained a good and cheap Manufacture of our own, it is sold to a very low price, to wit, 10 d. or 12 d. a Bushel, on purpose to undermine us; whereas not many years since in times of Peace, it was usually sold at 4 s. a Bushel.

6. *English refined Salt* is better and much cheaper than any the *Dutch* can furnish themselves withall. And when its worth is known, its possible it may become a Staple Commodity, to furnish not only the Northern parts withall, but also *Ireland, &c.*

O F
I C E L A N D.

THIS Treatise being chiefly intended for the promotion of the Manufacture of Salt, (and Fishery,) I am next to discourse of the uses thereof, in curing and saving both Fish and Flesh; The year in the Law account, begins at *Lady-Day*, and about that time our *Tarmouth* and *North-Sea* Fish-Boats set out to the *North* of *Scotland*, and to *Iceland* for Cod, of which *Island* meeting with no satisfactory Account in Print, and having made many Inquiries, and held long Discourses with divers Masters of the Doggers of the Royal Fishery Company, to wit, Captain *Arnold Padget*, Mr. *Clowdesty Cooke*, Mr. *Joseph Bond*, Mr. *Robert Payne*, Mr. *Joseph Fisher*, Mr. *Timothy Fowler*, who have Fished many years there and sailed round it: They give the following account of the Commodities of the *Island*, and of the manner of the Inhabitants living there.

The Place is a Rough Hilly and Snowy Land or *Isle*, called *Iceland*, either from the great quantities or Mountains of Ice that in those Seas are floating *Southwards*, till they prove hollow or spungy underneath, and by their Collisions break asunder, and become smaller and at last overlet and dissolve, or from the perpetual Ice and coldness of the Air, which is there sharp for eight Months together.

One *Robert Payne*, Master of a Barke called the *Jewel* of *Tarmouth*, was in 1658 about nine days enclosed amongst the floating *Islands* of Ice, and escaped with great hazard.

The *Island* it self is large, to wit, about the bigness of *Ireland* Mountainous, having a Ridge running through it, *Four-nier* saith it reacheth in Latitude from 64° to 68° , but the Masters abovementioned say this is a gross mistake, that the most Southwardly part of it is *Ingulf-foot* in $64^{\circ} 25'$ of North-Latitude, and the most Northwardly part is *Rag-Point* in Latitude $66^{\circ} 5'$, Whereas the *Atlas* also makes part of the

Island above a degree to the Northward of the Arctick Circle, which is a gross mistake, refuted not only by Observation, but also by the *Suns* continuance two Months above the *Horizon* in the middle of *December*, in the *Northward*-most part of the *Island*.

This *Island* lies *Northwestwardly* from the *North* of *Scotland*, to wit, from the *Start* or head Land of *Orkny*, to *S. W.* head of *Fero* is 55 Leagues distance, and from thence to *Ingulf*-foot on the *Southside* of the *Island* it is 85 Leagues more.

The *Island* hath 4 remarkable Mountains in it.

1. To wit, *Ingulf*-hill on the *South-Eastside*, the Top whereof may be seen afar off at Sea against bad Weather.

2. *Hacksford*, on the *N. W.* side two Leagues from the Sea of a great height.

3. *Snowhill* on the *N. N. W.* side, the plain Land there being called *Rook hill*.

4. The famous burning Mount *Hecla*, about the middle of the *Southside* of the *Island* 60 Miles or more from the Sea.

Some others of them are said to Burn and be always covered with Snow, but this being the most Eminent, we shall be the more large in discourse about it.

Out of a little Book intituled *Geologia Norwegica*, translated out of the *Danish*-Tongue by *Daniel Collins*, and Printed in 1663, the Author of it being a learned Minister, we have the following account.

Mount Hecla, by the Inhabitants called *Hecklefield*, Burns continually with a blew Brimstonelike, and most dreadful Flame, casting up and bestrowing the Fields round about, with such great quantities of Brimstone, that divers Ships may yearly be Laden off with it; and it oft times strews the Land with so many Ashes, and other burnt Stuff, that the Country for the space of ten Miles round about, can yield no profitable Increase; and when it Burns with greatest Vehemence, (for it Burns sometimes more feircely than others) it makes a terrible rumbling like the noise of loud Thunder, and a fearful cracking and tearing, that may be heard a long way off by the Inhabitants.

Martineire in his *Northern Voyage* tells us page 134, that himself and another, having two Guides, and being desirous to

to see and ascend *Mount Hecla*, travelled for two days together over Mountains craggy and unfrequented ways, and when they were within a League and a half of it, found the Ground all covered with Ashes and Pumicestones, over which they were forced to March towards the bottom of the Mountain, the Sky being Serene, and no flames to be seen, they took a resolution to go up it, but the Guides informed that if they passed any further, they would run great hazard of sinking into the holes the Fire had made, from whence there would be no likelihood of recovery.

However he and his Companion Marched over the Ashes and Pumices, (mid Leg deep) towards the Top, where they saw a great number of Birds flying up and down as black as Pitch, and they were *Ravens* and *Vultures* which build there.

Being got about half a League up the Hill, they found it begin to tremble under their Feet, and heard a strange Crashing and Rumbling within, which argued a Hollowness, and gave them no little fear of sinking into it: At the same time round about them they perceived great Chinks, out of which Flames and Sparks came forth, which were noysome and stunk like burn'd Brimstone, which frightened them so much, that they got back as fast as they could, for fear of being Swallowed.

Being got about thirty paces back, a Cloud of Ashes broke suddenly out of the Mountain, (so big and thick it obscured the Sun,) and fell upon them in such manner, that they could not see one another: but that which frightened them the most, was to see every moment new gusts of Fire and Ashes break out fresh and fall upon them like Hail, with a continued noise and rumbling under them, that their fear added Wings to their Feet.

They saw a Pumicestone about the bigness of a Hog'shead, which had been thrown from that Mountain a little before, and whilst they were admiring how it should be possible, one of the Guides affirmed, he had seen much greater, and among the rest, one which ten Men were not able to move; and affirmed moreover, that besides the Flames, Cinders and Ashes they had seen, that the Mountain throws out sometimes scalding hot Water, sometimes flames, sometimes Fire, and sometimes nothing but Stone.

Ittigius in Lucubrationibus de Montium incendiis, relates the like Story of *Dithmar Blefskins*, who spent 4 days in Viewing and ascending this Mountain with no better success; the story whereof is in English in *Purchas's Pilgrims*.

We read in *Geologia Norwegica*,¹ That in *Anno 1626*, this Mountain of *Hecklefield* broke out with such a Flame, that it cast terrible and unusual peeces of Fire out, which flew round about a great way, and the Ashes some hundreds of Miles; and saith the Author, was seen in the *Northward* most parts of *Norway* which seems impossible, yet it is related for certain that it was so.

They have hot Baths on the *West* side of the Land, particularly one 17 Leagues from *Snow-Hill*, in a Harbour called *Lowfy Bay*, which issues from a Rock, about which they use to make a Mound or Pond of Rock, Stones, Flags, and Earth, till it be deep enough for a mans body

In the *Philosophical Transaction*, N^o 103, Dr. *Paul Biornnius* residing in *Iceland* informs us, that they abound with hot Springs, of which some are so hot, that in a quarter of an hour they will sufficiently Boyle great peeces of Beef, which is thus ordered. They hang Kettles with cold Water over them, in which they put the Meat to be Boyled, for fear of either Burning or throwing up the Meat, by the fervent and vehement ebullition of the hot Waters: These Waters do harden and petrify about the brims of the *Therma*.

Arngreim Jonas, one of the Writers of the small *Duodecimo* Books called *Republicks*, whereof there is one for each Kingdom or Government, gives a much larger Description of it than is to be found in any *Atlas*, where the Reader may meet with an Account of the time, when it first came to be Inhabited by the *Norwegians*, which he asserts to be in *Anno 874*, and was afterwards replenished by the *Danes*, under whose Governmet and Religion it now subsists.

The *Island* is well Peopled, but the Inhabitants live only in the Valleys and towards the Sea-shore.

Their

Their Dwellings deserve not the name of Houses but Caves, contrived to avoid the vehemence of Winter, and are commonly made in the Vallies at the feet of Mountains, over little Springs or Currents of Water wherewith they abound; the Walls or Sides are made of Stone, and Rocks with Flags between them.

The like may be said of their Churches, The Ridges of both appear but a little above Ground, are made with Rasters and Boards, and are covered over with green Turf; Neighbours seldom have their Houses Contiguous, neither are there many of them as one may say in a Village together, yet the Habitations of some of the Gentry are Wainscotted within.

Of the Inhabitants.

They are a lusty, comely, affable People, accounted sincere in their Dealings, addicted to Learning, having three Universities (such as they are,) and divers of them have Travailed far; They are long Liv'd, Healthful, their Drink and Food being but mean, as we shall hereafter intimate.

The Diseases they are most subject to, are the Cholick and Leprosy, they have no Physicians. (as not allowable by Law) said *Journier* in his little *Geography*.

Some few Chyrurgeons they have for the Curing of Wounds.

Much of their Dyet especially in Summer-time, begets upon them such a filme, Leprosy or Scurf, as peeles off after change of Dyet in Winter.

Of the Weather

The Aire is healthy all the year long, the changes of Weather are uncertain, nor do they fall out according to the four Seasons of the year, sometimes it Snows as well as Hails in the midst of Summer, and the Winds blow, now and then most furiously in that Season.

Though

Though the Weather be sharp for eight Months together, yet most part of the Winter the poor Fishermen that cannot purchase Boats of their own, (on which account they are in great Bondage to their Employers Fish in the Harbours, yea and some of our *Tarmouth* and *North-Sea*-Boats Fish there in the Winter-time in *December* and *January*, &c. And make two Voyages in a year, Complaint thereof being made in Parliament (as Destructive to the young Fry,) begot the following Clause in an Act 16^o *Regis, Car. 2. Chap. 16.* Intituled an Act for *Regulating the Herring and other Fisheries*, and for *Repeal of the Act concerning Madder, viz.* And for the “better regulating of the *Island* and *Westmony* Fisheries, and preservation of the Spawn of Fish there, it is Enacted that “from and after the 25th. of *October* 1663, No Ship or Vessel “shall proceed upon a Fishing Voyage for *Iceland*, or *Westmony*, out of any Port, Haven, or Creek in *England* or *Wales*, “or out of the Port of *Berwick* upon *Tweed*, until the 10th. of “*March*, upon the forfeiture of every such Ship or Vessel, with “all her Furniture, Tackle, and Apparel, and of all Fish caught “in such Ship or Vessel.

Of their Commodities.

1. **T**hey abound with great plenty of Sheep, Cows, Pullocks, Horses, with admirable Pasture Ground in the Valleys.
2. Great plenty of most sorts of Sea-Fish, all the year, round their Coasts.
3. They abound with many Lakes on high Mountains, well stored with fresh-Water-Fish, and with Rivers well stored with Salmon, and Salmon-Trouts, of which they sometimes take 20 or 30 at a draught.
4. In Summer-time they have great plenty of Wild-Fowle, as Mallard, Ducks, Teal, Partridge, Wild-Geese, Plovers.
5. In Winter time, they have Ravens, Eagles, Wild-Ducks, Swans.

Of the Commodities they want.

1. **T**hey have no Coals, Wood, or Trees, for Fuel or Building.

Some very few Sallows and Birch growe there, but not above half the height of a Man.

2. They have no Corn or Grain whatsoever, consequently no Wheat, Barly, Oates, Pease or Beanes, consequently no Beer; some few Berries they have called Ashberries or Anberries.

3. By consequence (as 'tis likewise most certain upon Evidence,) they have no Swine, Hogs, nor Poultry, consequently no Hen-Eggs, albeit possibly some few Hens may be kept upon Corn Imported by the Gentry.

4. No Hemp or Flax, consequently no Linnen.

5. No Salt, Glass, or Metal, consequently no Lead, Tin, Iron, or Copper.

6. No Fruit, good Roots or Flowers, except Daisies and Cowslips.

7. No Townes, Markets, Trades, or Shopkeepers.

Now these being their Defects, we shall Expatriate in shewing how they are supplied. *

1. **T**he want of Coals and Fewel is supplied by Turf, which they have in abundance, Cow Dung, &c.

The want of Timber is supplied by great quantities that drive a Shore in *Blackbay*, and on *Ragg* and *Langlies Point*, on the Northward most part of the *Island*, conceived to come from an *Island* called the *Groyne*, and what more they want is Imported.

2. Their Drink is Milk mingled with Water, In Winter time they are forced to drive their Cattle into their Caves, and there fodder them with Hay; and many People barrel up Milk for a Winter supply, when the Cows can yield but

little, for before they are driven out into Pastures they are almost famished, and reduced to exceeding Leanness.

They feed on the Ground from *March* to *Midsummer*, or longer before they are fit to Sell to such Ships as Arrive, The Inhabitants kill them not till about a Fortnight after *Michaelmas*, and then cutting the Flesh into Collops, the Frost will save it, and these they also Smoak-dry in their Caves or Stoves for Winter-Food, which is good Broyled upon Coals.

When they Broile them they Butter them, and indeed *Iceland* affords incredible plenty of Butter, as is mentioned by *Olau Magnu*, *Fournier*, &c. which they crowd into large Pats and long Chests without Salting it, and it will have many Colours like a Rainbow, our Seamen think it not so good as Kitchinstuff.

Some few Cheese Curds they make, but I do not hear of any Cheese.

Most of their Sheep they fodder in Wintertime, in other Caves adjoining to those they dwell in, and some of their Sheep and Horse make a shift to live upon the Grass under the Snow, and the *Coralline Moss* called *Muscus-Amarinus*.

If a Sheepe, Cow, or Bullock, die a natural Death, it is accounted Venison, and I am informed, that sometimes they take out the Guts of a Cow or Bullock, and leave him standing in his Skin on his Legs, or propped up in the Air or Frost all the Winter to be Eat the next Summer, and this is accounted a Rarity, because it is an Adventure, in regard of Bears that come over upon the Ice from *Groenland*.

Of their Fishing.

THEIR Bread is Cod caught in Winter-time, and dried in the Frost, commonly called Stockfish.

In the Summer-time they catch much of it, wherewith they make most excellent Haberdine, after the manner of Poor Jack at *Newfoundland*, and our of these Commodities Flesh, Oyle, Wadmall, and Brimstone, the King of *Denmark* raiseth a considerable yearly Tribute, keeps Officers on Shore to Collect

lect it, and yearly sends 7 or 8 Saile of Ships from 60 to 100 Tons, to *Wacklingford, Westmony, Ireford*, and other Havens to fetch the same, and to keep the Inhabitants from trading with the Subjects of any other Prince, which they cannot do, but in such Harbours where these Ships are not, and there Wheat, Barly, Linnen, Salt, Iron, Tobacco, &c. are good Commodities to put off in barter for Wadmoll, Sheep, Beef, &c.

Sometimes notwithstanding where these *Danish* Ships are, some of our Shipping may put into safe Harbours to avoid Stormes, and by leave of the Commanders, may barter some Commodities with the *Ilanders* for Prov sions.

Our Fishery there is said to be restrained by the King of *Denmarks* Grant or Patent, to be no nearer the shore than within sight of Land, yet multitudes of Fishery Vessels, both of Strangers and English Fish there.

The *Dutch* notwithstanding have the Priviledge to Fish in some of their Harbours, for *Grampusses*, and *Dubartas*, which is a ballard kind of Whale.

Their Bread is also another sort of Fish, called *Hokettle*, or the Nurse-Fish, which hath a sharp Ridge on his Back that cuts asunder Fishery-tackle, which often times doth Inconvenience our Fishermen, some of these Fish are very large, and may weigh three or four Tons.

A Fish may yield two or three barrells of Livers, of which they make Oyle to burn in their Caves underground, the other parts they cut into pieces, and Bury them four or five Weeks under Ground, then wash them, and dry them in their Stoves, which is afterwards sold to the Neighbourhood as a valuable Commodity at about 6 *d.* a Stone, and this serves instead of Bread, and if it be broyled on the Coals, it serves for Meat.

Of the Skins of this Fish they make their Shooes.

Our Mariners often catch this kind of Fish, and having obtained the Livers, drag the Body on Shore, where it will procure two good Sheep worth Nine shillings in barter, very large like Calves, able to bear a Man on stride, and as fat as Porks, the want whereof is supplied by other Flesh.

A Sheep that naturally Dies, or is frozen to Death, is esteem'd a great Rarity. Linnen, the better sort have in barter; The general Employment of the People is either Fishery or the making of Wadmoll, which is a coarse sort of woollen-Cloth, made of their Sheepes Wool or Hair; Of which Cloath, they make Gowns, Coats, Capps, Mittins, and other wearing Clothes, sold by Slopellers to Seamen and Fishermen.

But Breeches, Boots, and Stockins, they make of the skins of the Sheep, the hair being shaved away.

Also their Garmen s next the skin and their Bedding is made of Wadmoll, which in the wearing, in their Caves, proves very hot, and breeds abundance of Lice and Vermin.

What other Commodities they want, as Salt, Iron, Linnen, &c. they are commonly supplied withall by the *Danes*, wherewith their Factors and the better sort, or Gentry, live splendidly.

The Dyet we have been discoursing of, though it seems unpleasing to our Constitutions, yet 'tis better than that of the *Northern Samojeds*, whom *Martinier* tells us Live in Summer-time upon Bears, Wolfs, Foxes, Crows, Eagles, and other wild Creatures, which they Hunt first, and then Eat in their Cabanes broiled upon the Coals, and subsist in the Winter upon nothing else but Fish dried in the Sun in Summer-time, unless by accident they kill some of those Bears who (having nothing left by the Snow in the Fields,) come home to their Cabanes to devour them.

Horses they have to carry Fish, Flesh, Turf, &c. up and down, on these the Women use to ride cross Legg'd to Church, after the custom of the poor Country Women of *France*.

Hawks abound in great plenty.

Also Eagles ready to prey upon Children, whose Parents to prevent the danger, cause them to wear Bells or Collars of Bells about their Necks.

Also little Shock-Dogs there abound, which are said to be the Whelps of ordinary small Bitches, lined by Foxes that come over on the Ice.

Of their Militia and Government.

They have no other *Militia* on the *Island*, but only one Fort, on the cheif of the *Westmony-Islands*, on the *West South-West side* of the *Island*, 10 Leagues from the Merchants *Foreland*, with 12 Iron Guns in it, and there their Courts are held, and their Bishop keeps his Residence.

As to what follows about their Government and Lawes we take from *Dithmar Belskins* and *Arngreim Jonas*, which are the Authors as yet of most credit, and are cited by *Purchas* in his *Pilgrimage*.

The Governour yearly on the 29th. of *June* according to custom, meets with the Court of Justice consisting of 12 Men appointed for the Execution of Justice called *Lochmaders*, who being assembled, each of them hath a Book in his hand containing the Laws of that *Island* written in the Vulgar Tongue, Accusation and Answer being made, they go apart to confer of the Sentence, and pronounce it.

Those that are to die for Murder or Theft are Beheaded. Their Grounds being scarce otherwise divided than by a low Ridge or Wall of Stones, Stealing of Cattle becomes a frequent Crime; The Punishment for the meaner sort of Crimes, is to mark the Criminals in the forehead.

The Country is divided into Districts or Divisions called *Reppagogies*, where 5 Men are chosen and empowred to act joyntly like a Bench to put Laws in Execution.

Divers Laws they have to prevent Beggary, which may be divided into three heads.

1. To prevent the reducing of any to extream and suddain Poverty, through their own faults, *humanitus loquendo*.
2. For raising Collections to relieve Losses sustained by Fire.
3. About Almes.

Laws of the first kind are.

1. **T**Hat one born of beggarly Parents and seeking his Maintenance from door to door, (unless Diseased) should not be capable of holding an Inheritance, till three years after he hath deserted the practice.
2. That such as have brought Poverty on themselves through their own faults, should be lawfully gelded, albeit with danger of their Lives, least living from doore to doore they might beget Children like their Parents, that might prove a Burthen to the Commonalty.
3. That they should have no Releif, according to that of the Apostle, 2 *Thessalonians*, c. 3 v. 10. *He that Laboureth not, let him not Eat*, neither should they be entertained in their Houses.

Laws of the second kind.

1. **N**One to enter or settle in a *Reppagodie*, without leave and proof that he can sustain himself and Family without begging.
2. Losses sustained by Fire to be valued, and the *Reppagodie*, by a joynt Collection to make good half the value.
3. And if a Man loseth a quarter of his Cattle by the Murrain or Rot, half the value so lost to be raised as before, but this not to be performed above the fourth time.

Laws about Almes.

1. **S**uch as are poor through Sicknes, Age, or other Casualties not in their own power to prevent, are to have Alms which are either private or publick.
The private Alms related to the maintaining of the indigent by their kindred and Relations, if of Ability.

2. If

2. If that failed, they were to be maintained in common by the *Reppagie*.

Pursuant whereto our Masters of Fishery Vessels affirm they have no Beggars in *Iceland*, that they have often seen Aged People past Labour sent on Horse back from House, to House, or rather from Cave to Cave, to be maintained there three Months more or less as the *Quorum* of *Reppagies* appoint.

Of the *Iceland* and *North-Sea* Fishery.

Of the Cod there caught by the Inhabitants in Harbours or near the Shore, they make either Stockfish or Harbeline as is mentioned before in page 82.

Our selves and others that have only License or Privilege to Fish off at Sea, salt it up in Heap, Mud, or Pile, as they call it, and this sort is commonly used for the Victualling of Merchant Men, and in the Reign of King *Charles* the First, was also used 3 days in the Week for Victualling the *Navy Royal*, being a sort smaller and cheaper than those caught about *Shetland* or the *North* of *Scotland*.

The price then allowed the Victualler for a fild Cod, to wit one of 24 Inches long, which served eight Men a Day for whole Allowance, being seven pence, (in a Proportion of Harbour Victuals) and eight pence three farthings in the Channel, or Victuals to be spent to the Northward of the *Canaries*, or North Latitude of 27° , and Nine pence half penny in Victuals to be spent to the Southward of that Latitude, and this was a dear rate in Comparifon of what they may be had at now.

The manner of Catching is thus,

A Fisherman hath a Line of 90 fathom length or more, with a Lead at the end of it called a deep Sea-Lead, of about 6 or 7 pound weight to sink it, above which is a cross-Stick called a chop-Stick, with two Lines and hooks at them with baits.

The

The Cod are a ravenous sort of Fish, pursuing Herrings or any small Fish for their Prey, are baited at certain seasons on deep Banks; at other seasons retire with Herrings as 'tis believed to the greatest profundity of the Ocean near them.

They will bite at any Bait either Flesh or Fish, and the rest seeing one hath sped will follow: particularly this Summer one Mr. *Robert Payne*, Master of one of the Companies Doggers, informes, that (finding no Swimmers) he baited and caught one Cod in 90 fathom Water, and with him making more Baits, he at last inticed the Shole by degrees from 90 to 40, 20 and 10 fathom Water, where the Fish were plainly seen, and were so greedy that they took 1600 in a day, and might have done more, if they could have dressed and cured them, the manner whereof here and elsewhere is;

The Cod being haled on Board, they are laid upon the Decks in the Vessel, (or may be on boards or Tables;) One Man chops or wrings off the Head throwing it over Board, and enters a Knife at the Navel, and cuts it up to the Throat and downwards, taking out the Guts, Garbidge, and Rows, to throw away; as also the Livers to reserve in barrels to make Oyle of.

Another, the Splitter, takes out the back-bone, and lays the Fish open to the Tail.

Then they salt them, and lay them Nape and Tail in a Bed on the Deck, as fast as they can dispatch.

The manner of salting is, a Man hath a small salting Platter that may hold about a quart, which he disperseth chiefly on the middle or thickest part of the Fish, from whence it runs off on the Tail and thinnest part.

And when one lay is done, they pile them up in their Holds, and proceed to another, making in the middle of the Hold, the course of Fish higher by two foot than on the sides, that the Pickle descending may fall on the sides.

Of Oyle made of Cods Livers.

THe Livers being barrell'd up, three barrels of their own nature without any Artifice, yield one barrel of foul Oyle, the which is thus got, let the barrels stand 48 hours on

on their Heads and the Oyle will swim at top, from whence it may be keeched with a pot, so long as the Oyle may be taken off without Blood, which they put into an empty barrel, let it stand six hours and then scum it off, and there will be left about half or more in Blood and Guts.

The Remainders or Residue are called blubber-Livers, when brought home, or to a convenience for Boyling are Boyled up, and 7 or 8 barrels of Livers may yield one barrel of Oyle.

Here we may intimate, that the Fish it self separated from the Bones and cut into peices is called Blubber, and all great Fish or Sea Monsters afford Blubber for making of Oyle.

Eight barrels are reckoned to a Ton, formerly sold for 30*l*. but now not at above half the Value; this Oyle is used for Lamps, as also by Curriers, and Ship Carpenters, &c. And for this Information I am beholding to Mr. *Joseph Fisher*, a Master of one of the Doggers belonging to the Royal Fishery Company.

Green Fish or Cod unbarrelled.

THese are also caught in *Northsea* Vessels, which set out about *April* or *May*, and Fish about the *Norib* of *Scotland*, or more *Northwardly*, till the end of *August*.

1. When they are caught, they split, and used to salt them with Bay Salt, and lay them in Heaps or Piles one above another, with Lanes of Salt between each, and so fill up till they have a Lading, if they can.

2. They bring them to a home Market, and sell them to the Fishmongers, who Salt them with fresh Salt, that hath not been formerly used, to keep them cool and from Wind and Air, as is pretended probably in excuse of the use of bad Salt.

As to their Quality, Many of them stink, for 'tis a certain Maxim, that if Fish or Flesh be not well cured and salted at first, they cannot be recovered, and such as do not Stink, are not very acceptable at home or abroad, by reason of their Dirt and yellowness which the Bittern contributes to, as also mortifies and corrodes their substance, and that more speedily in a hot than a cold Climate.

And Salt-Fish thus ordered, 'tis granted will not keep above six Weeks in a hot Climate; Yea many Vessels or Ladings of it have frequently and lately miscarried at Home, as may be easily proved by the attestation of the Fishmongers.

Much both of this and *Island* Cod, that is brought home in *April* and *August*, hath the Salt washed out, and being dried in the *Sun* and the *Wind*, is called *Haberdine*, after the manner of making *Poor-Jack* at *Newfoundland*, of which more hereafter.

Green-Fish, (*alias* *Staple Fish* as they call it,) cured with a good Salt proves excellent, and the Fishmongers alledge, it exceeds barreld Cod in goodness and cheapness.

But as to this Assertion, I cannot tell how to agree, unless restrained to the Summer-time, at which time indeed if Cod be but once salted and stapled, the Pickle and moisture run away; whereas if but once salted and barreld up, its possible the heat may cause the moisture to impair the Fish, but in Winter-time, Cod slightly salted, and after a few days repacked with fresh Salt, hath proved most desirable, white and firm, the *Dutch* both in Summer and Winter barrel up all they salt.

This Summer, the Royal Fishery Company brought in 800. large Fish in one Vessel, which were sold at 20*l.* the Thousand, that is not above a Groat a piece, the which were ordered to be cured with *Spanish* Salt; the Company being induced to use it for these Reasons.

1. It was said to be cheaper than *Portsea* Salt.
2. A less quantity of it, would cure more Fish than *Portsea* would do.
3. There was little *Portsea* Salt then to be had.
4. It would make the Fish too good for Ship Expence.

To which I can now Reply,

1. That *Spanish* is dearer than *Portsea* Salt.
2. That *Portsea* Salt hath not been tried on *Staple* or *Green-Fish*, but in *Herrings* we find a less quantity of *Portsea* Salt to go further, with better effect than any other Salt, inso-much that the Companies *Herrings* have yielded two shillings a barrel more for being cured with this Salt, than other *Herrings* cured with other Salt, as *Mr. Watson* Husband to the Company can well prove.

3. That now this and *Lemington* Salt will become common, and at a moderate rate.

A Narrative how Salmon is Cured at Berwick, imparted by Mr. Benjamin Watson, Merchant.

1. **T**hey are commonly caught from *Lady-day*, to *Michaelmas*, either in the River of *Tweed*, or within three Miles or less off at Sea against *Berwick*.

2. Those caught in the upper part of the River, are forthwith brought on Horseback, and those at the lower part thereof in Boats, to *Berwick*, fresh.

3. Then they are laid in a pav'd Yard, where for curing there are ready, 2 Splitters, and 4 Washers.

4. The Splitters immediately split them, beginning at the Tail, and so continue to the Head, close by the back Fin, leaving the Chine of Salmon on the under side; taking the Guts clear out, and the Gills out of the Head, without defacing the least Fin: And also take out a small Bone from the under side, whereby they get to the Blood to wash it away.

5. Afterwards the Fish is put into a great Tub, and washed outside and inside, and scraped with a Muscle-shell, or a thin Iron like it; and from thence put into another Tub of clean Water, where they are washed and scraped again, and from thence taken out, and laid upon Wooden Forms, there to lie and drey 4 hours.

6. Thence they are carried into the Cellars, where they are open'd, or laid into a great Fat or Pipe, with the Skin-side downward, and covered all over with *French Salt*, and the like upon another lay, and so up to the Top, and are there to remain six Weeks: In which time 'tis found by experience, they will be sufficiently salted.

7. Then a dried Calve skin is to be laid on at the top of the Cask, with Stones upon it to keep them down; upon the removal whereof, after 40 days or thereabouts, there will appear a Scum at the top about two inches deep, to be scum'd off or taken away.

8. Then the Fish is to be taken out and washed in the Pickle, which being done, they are to be carefully laid into barrels, and betwixt every lay, so much Salt sprinkled of the remaining melted Salt in the Fats, as will keep them from sticking together. And after the barrel is one quarter full, to be stamped or leaped upon by a Youth of about 15 years old or thereabouts, being covered with a Calves-skin, the like at half full, and also when quite full.

9. Then a little Salt is to be laid at the top, and so to be headed up; and then the Cask is to be hooped by the Cooper, and blown till it be tite.

10. Then a bunghole is to be made in the middle of the Barrel, about which is to be put a Ruff or Roll of Clay, to serve as a Tunnel, whereby frequently to fill the Barrel with the Pickle that is left in the Fat, which will cause the Oyle to swim; which ought to be frequently scum'd off, and serves for greasing of Wool. And thus after 10 or 12 days to be boused up as sufficiently cured, and fit for Exportation.

Observations on the former Method.

5. **A**rticle. A Brush is fitter for the outside, and a Sponge for the inside.

6. Article. They may be salted but once, as Cod is salted, or they may be Piled as Pilchards, and the Oyle that way may be saved.

10. Article. 'Tis convenient to supply them with a Pickle, and we reckon the Fish is best cured in its Oyle; If not, it will rise and may be scum'd off though but once salted.

Salmon failing, or much decreasing this year at *Berwick*, 'tis not amiss to intimate where there is Plenty, to wit, the River *Dowry*, or *Aberdowry*, in *Merionethshire*, and several other Rivers saith Capt. *Lloyd*, (an eminent *Welsh* Gent. in a Paper imparted to *Parliament* Men, and the Fishmongers,) afford vast quantities of Salmon, himself having taken (big and little in three hours time above six Score, which he avers to encourage the undertaking of a Salmon Fishery there, &c.

OF THE
NEWFOUND-LAND
FISHERY.

Of Poor-Jack.

That sort of Cod that is caught near the Shore, and on the Coast of *Newfoundland* and dried, is called *Poor-Jack*.

Our Vessels set out from *Dartmouth*, *Plymouth*, and many other places about the beginning of *March*, and continue Fishing all the Summer, and give over about *Michaelmas*.

The manner of catching is the same as of *Iceland*, and other Cod save that here, it is performed in Boats near the Coast. In a Treatise called the *Golden-Fleece*, we read, that three Men at Sea in a Boat, with some Men on Shore to dress and dry the Fish, will in 30 days kill betwixt 25 or 30 thousand, which with the Train-Oyle are worth about 120 *l*.

When the Shallops or Fishing Boats are full, they carry the Fish on Shore, to such place where there is a Stage or open Scaffold to the Sea, where they place the Fish like sheaves of Corn, where being prepared and salted for 24 hours time, and having the same washed out with sea-water, they are carried forth and exposed upon the Rocks, or the Sand to the Wind and the Sun to dry; for performing whereof a temperate Windy season is best, they turn them in six hours which they often repeat, and in the Night lay the Skin-side uppermost to avoid Moisture, then they Pyle them up, and a Week after expose them to the Air again, and after six days press them divers times, and then being dry, are laid up in Heaps or Piles in the holds of Ships, as well cured, and fit for Market, either for present expence, or for long Voyages, and is much used by the *French* and *Spaniard* for that purpose.

In *Purchas's Pilgrims*, page 1886, we find, that in the year 1622, in the Narrative of Capt. *Richard Whitburnes* Voyage, that the Fishery there was then very considerable.

The Bank is a Sandy Ground, 12 Leagues broad, and in length tending *North-East*, and *South-West* above 110 Leagues, 20 fathom deep on the shallowest part, abounds with Fish all the year, by curing rendred Green-Fish, worth 5 l. or 6 l. the hundred.

He saith that the *French*, *Biscayers* and *Portugals*, fetch from the Coast and the Bank, which lieth within 25 Leagues of the South Cape of that Country, and from the Coast of *Canada* which lieth near unto it, above 400 Saile of Ships Ladings yearly.

That the *French* use to Fish both Winter and Summer, making two Voyages every year thither, curing Green-Fish on the Bank, and Poor-John on the Shore.

That the *English* in the year 1615, had about 250 Saile great and small, the Burthen and Tonnage of the whole, he computes at 60 Ton each Vessel one with another, to be 15000 Tons, and allowing 20 Men and Boys to each Vessel one with another, there were no less than 5000 Persons employed.

Each Vessel held one with another, by a rationel Estimate 120 thousand Fish, and 5 Ton of Train Oyle, and all these Sold after the rate of four pounds the thousand, amounted in Money to one hundred and twenty thousand pounds; this is not a penny a Fish, and if it yielded less it was ill Sold.

To which must be added the Train Oyle being 1250 Tons, which at a cheap rate of 12 l. per Ton, makes 15000 l. more, to which may be added the Overage and profit in Foreign Countries; and it is a considerable Gain obtained by the sole Labour, and Industry of Men, without Exchange or Exportation of our Coin and Native Commodities, or other adventure than of necessary Provisions for the Fishing, as Salt, Nets, Leads, Hooks, Lines and the like; and of Victuals, as Bread, Butter, Beere, Beef, Pork, Cheese, Pease, &c. By which means many Tradesmen are Employed, as Bakers, Brewers, Ship-Carpenters, Coopers, Smiths, Rope-makers, Line-makers, Hook makers, Pully-makers, &c.

The

The Merchants in their Petition and Remonstrance in 1659, set out the State of this Fishery as followeth,

We had many hundreds of English Ships, and many thousands of Seamen, that had their constant yearly employment for Newfoundland, and being Laden with Fish, the most of them Sailed from thence for several Ports of Spain, and its Territories; as from 50 to 60 Ships for Bilboa and St. Sebastian, 40 to Cadiz and St. Lucar, 20 for Malaga and Velez, from 20 to 30 for Alicant, Valencia, and Cartagena: Besides others that went to the Groyn and other Port Towns in Spain; the most of the remainder went for Maiorca, and Minorca, Sicilia, Sardinia, Naples, and spent in the Dukedom of Milan, and in Victualing of their Gallioons, Gallies, &c. Hereby, (well considered,) we had great advantages; for that clearly there was added to the Stock of the Nation, at least five hundred thousand pounds per Annum, and so much got out of the Sea, by the Labour and Industry of our People, and the Shipping maintained. And it was also a Nursery for Seamen, breeding more than all other Trades whatsoever; they carry not out so much Beef and Bread as they would have Eaten in England; the most of their Food being Fish: And if they had not been thus Employed, perchance they might have lived idly at Home, and so have been unprofitable Members of the Common Wealth, and so have had their Subsistances from other Industrious Persons.

Whilst we have assisted the French, they have in a manner got this whole Trade; this year they had above 250 Ships at Newfoundland, and have obtained free permission from the King of Spain, to enter into the Ports of Bilboa, St. Sebastians, and Pasague, with their Fish and Men, where they do not only furnish the Men of War that take us, but the Fish is carried from three to four hundred Miles up in the Countries of Spain.

St. John de Luz, had not formerly above 8 Sail of Ships, and this year they have had near fifty Sail, a good part of which were English Prizes, and without doubt incovertly the Spaniards have a great interest in them, and it will be a hard matter now to get this Trade again from the French.

Thus they, and the French are said to be more numerous and Industrious in that Trade than heretofore, whereas the English much decline, the causes whereof are;

A Governour was sealed there in 1638, by King *Charles* the first, with a Power of leavying Impositions for liberty to Fish in our Harbours, namely the *French* paid 5 *per Centum*, which made them to retire to the Southside of the end of the *Island*, where they built two Forts, and Fish from *Cape Race*, Westwards: and in the year 1670, took in two Bays more to wit, *Placentia* and *Passara*, and have above five times increased their Fishery, Ships, and Vessels, since they had a Governour, and they Fish four Months in the year more than we, and thereby make double Voyages. Our Planters observing this, took the opportunity in the absence of our Fishery Vessels, to Burn and destroy Woods, and the Stages and Houses we left standing, and remove and carry away the Boats, Rayles, Cask, Salt, Nets, and Pans for Boyling of Oyle, which we left there, to remote Places, where we cannot, or do not usually Fish, to the end that by selling the same to our own Interlopers, that come sooner, or stay longer than the Fleet, to the *French*, and to the *New-Englanders* for Provisions, and by destroying the young Fry, they might Fish as long as the *French* when we are gone, to the end they might furnish them, &c before we come. To which corrupt Practises we add some of our own, Namely, that those that come first destroy the Stages (if remaining,) of those that arrive afterwards, to the end they may get a Voyage before them, and many of our Vessels cast their Ballast in the Harbours; which corrupt Practises being complained of in Parliament, an Act was obtained, for Regulating the Fishery, viz. 16th Car. 2. Chap. 16. where we read it Enacted.

That no person whatsoever, do Collect, Leavy, or take, or cause to be Collected, Leavyed, or taken in Newfoundland, any Toll, or other Duty of, or for any Cod, or *Woo: John*, or other Fish of English Catching, under pain of the loss of double the value of what shall be by them Leavyed, Collected or taken, or caused to be Collected, Leavyed, or Taken. And that no Planter or other Person, or Persons whatsoever, do lay any Seynes or Nets, in or near any Harbour in Newfoundland, whereby to take the Spawm or young Fry, of the *Woo: John*, or for any other use or uses except for the taking of Bait only, upon pain of the loss of all such Seynes or Nets,

and

and of the Fish taken in them, or of the value thereof, to be recovered in any of his Majesties Courts in Newfoundland, or in any Court of Record in England or Wales, by Bill, Plaint, or other Action, wherein no Cessign, Protection, or Wager in Law shall be allowed.

And it is hereby further Enacted by the Authority aforesaid, that no Planter, or other Person or Persons whatsoever, shall Burn, Destroy, or Steal any Boat, Cask, Salt, Nets, or other Utensils for Fishing, or making of Dyle, or other Goods or Merchandize left in any Harbour, in Newfoundland or Greenland, by English; or Burn, Pull down, or Destroy, any House Built by English in Newfoundland or Greenland, to Live in during the Fishery Season; or Stage Built by them in either of the said Places, for the Saving or Ordering of Fish or making of Dyle, upon pain of the loss of double the value of what shall be by them Stolen, Burnt, or Destroyed, to be recovered in any of his Majesties Courts in Newfoundland, or Greenland respectively, or in any Court of Record in England; by Bill, Plaint, or other Action, wherein no Cessign, Protection, or Wager in Law shall be allowed.

After this, our Western Fishery Adventurers met with little or no redress of these Inconveniences, but rather fresh Discouragements, namely in 1665, the Dutch War being broke out, our Newfoundland Fishery notwithstanding proceeded, but out of our Ships about 1000 Men staid on Shore, to avoid being Prest to Sea in case they had returned, and these joyning with the Planters in their mischeivous praides, caused so much dammage to ensue, that the Town of Dartmouth humbly represented to his Majesty by Petition about the year 1670, (as I remember being then a Clerk in his Majesties Council of Plantations,) that themselves in one year had lost eight thousand pounds, and that in three former years, the Adventurers in general had lost after the rate of 6 per Centum per Annum.

And for Redress, craved the assistance of some Men of War as a Guard, with power to discover, encounter, and bring away our Men on Shore, which was granted, but returned (as I am informed) *re infecta*, having brought away very few.

They further craved of his Majesty the building of Castles, and setting of Garrisons and Plantations there in some eminent Ports, for which they alleadged reasons to the following purport.

1. That if we did it not, we might be prevented of the opportunity in the best Harbours by others, who hold such design Honourable, Lawful, Profitable, Easie, and Necessary.

2. That *Newfoundland* is an Island bordering on *America*, and lies in Latitude from 46 to 52°, and is nearer to us than any other Plantation, being but about 700 Leagues, or 10 or 12 days Sail from *Ireland*, and bigger than it.

That it was first discovered by *Sebastian Cabot*, at the charges of *Henry* the 7th. King of *England*, in the year 1496, and *Sir Humphrey Gilbert* took Possession thereof in the year 1583, in the name and to the use of *Queen Elizabeth*; that it hath divers *English* Plantations settled in it in the Reign of King *James* and *Charles* the first.

3. That it is in a healthful temperate Climate, much hotter than *England* in Summer, to wit, from *June* to *Michaelmas*, and no colder than the *North* of *England* or *Hamborough* in Winter; and by reason of its Verdure, cannot but be proper for Corn, Hemp, Flax, Rootes, Pulse, and Herbs of many kinds, of which kind some have seen fairer Crops for the quantity, than any growing in *England*, the Spring beginning there at the end of *April*, and the Winter at the end of *December*.

4. That the *Northern* parts of it are Hilly and Woody, but the *Southern* are a plain Champaign Soyle, and yields many considerable Growths and Commodities, viz. Trees,

As Pine, Birch, Spruce, Firr for Deal-Boards, Masts, Cypress-Trees, Oaks, Cedars, Hawthorns, Alder, Willow, Bark for Tanning and Dying of Nets, Charcoal for Iron.

And out of these Woods may be had, Pitch, Tar, Rosin, Turpentine, Frankincense. Soap-Ashes, Honey out of hollow-Trees.

FRUITS

F R U I T S.

As Vines, Goosberries, Rasberries, Mulberries, Filbeards, Strawberries, Hartles, Cherries, Wild-Peafe: *English*-Seeds have prospered there exceedingly, as Beans, Pease above a Man's height, Raddish, Cabbage, Turneps, Carrots.

W I L D B E A S T S.

As Beavers, Sables, Black Foxes, Hares, Marternes, Musk-Rats, Seales, Otters, which yield Furs; Deer called Ellans as big as Oxen.

F I S H.

Mackarels, Salmons, Peales, Herrings, Eccles, which may be salted and barreld for Exportation; Halybuts, Flookes, Pearles in them, Lobsters, Crabs, Muscles, Oysters, Muscles with Flounders, Launce, Caplin, Trouts, and many Sea-Monsters, and much more besides in many Springs, Rivers and Lakes.

F O W L E.

Partridges, Penguins, Pheasants, Thrushes, Black-Birds, Canary-Birds, Geese, Ducks, Pidgeons, Gulls, Godwits, Curlews, Swans.

C A T T L E.

Many sorts, as Wild-Hogs, Goats, &c.

To which inducements were added the necessity of such Plantations, for employing abundance of Poor, and breeding up of Fishermen; the third of the Men that go a Fishing being Green-Men, that never were at Sea before; and the cheapness of their being transported in comparison of other Plantations.

And the great advantage by their being there, to Build and repair Warehouses and Stages, in readines against the Arrival of our Ships, who spend 20 days in Building of Stages.

And Lastly, The considerable Livelyhood they would get, in catching and curing of Fish in readines against our Ships Arrive, whereby we might make two Voyages in a Summer.

Notwithstanding all which inducements, the Sea-Ports are neither strengthened nor Inhabited, the reason whereof may be, in regard the Coasts are extreame cold, when the Islands of Ice pass along the Shore; which Ice there found in the Spring of the year, comes from the North, and is there dissolved in a short time. One Capt. Edward Wynne, Governour of Mr. Secretarie Calverts Plantation, in a Letter dated the 17th. of August 1622, asserts notwithstanding, that it was not so cold there the last Winter, as it was in England the year before, that he remembred but three several days of hard Weather, and those not extreame neither, he having known greater Frosts, and far greater Snows in England.

Our scattering Plantations there are in the South part, where live none of the Savages.

The chief Harbours are Trinity Harbour, which is said to be the best in Christendom except Milford in Wales, seated in the entrance of a Bay of the same Name, on the Northside of which are divers other Harbours, and one noted River in the Body of the Land, which lies Northwest, where may be had a good Trade with the Natives for Furs.

About 20 Leagues to the Southward, is another excellent Harbour called St. Jones.

And 15 Leagues to the Southward of it, is the Harbour of Ferriland, and these, with Formosa and Renowse, are the chiefest that our Nation frequents in Fishing time, though there be about 20 good Harbours more, but the main of our Fishery lies from Cape Bonâ Vista, Northwards.

But the three first are most fit and capable of being Planted and fortified, for Ferriland lies within 3 Leagues of the furthest Southward Harbour; we frequent Trinity Harbour within 10 or 12 Leagues of the most Northward, and St. Jones near Midway.

The.

The Council of Plantations considering what a great charge it would be to his Majesty to build Castles, maintain Garrisons and a Governour there, and that three former Addresses to his Majesty to the same purpose had been rejected, refused to make any Report to that purpose, and perchance the same scruples yet remain.

Of Anchovas.

These are commonly Imported from *Genoa* (in *Italy*) in Barrels that hold about 3 Gallons, weighing about 36 pound, which are commonly Sold at 10 or 12 pence the pound, and such are there salted with *Spanish Salt*, into which they put a Pickle made of salt, Red-Wine, or the Lees thereof, with powder of saunders. Mr. *Alcorne* (oft before mentioned) saith, that many barrels of them are yearly lost, by reason of the Corrosive nature of the Salt; that he hath bought divers barrels of them, and to prevent such loss, hath taken them out of their old Salt and Pickle, and repacked them with his own *Portsea Salt* and Pickle, by which means they have been preserved two years longer, than otherwise they could have been.

And now we have good News to tell the Reader, namely, that they abound on the Western Coasts of *Wales* and *England*, for proof we offer the following Reasons.

1. I am informed, that the Learned Doctor *Pope*, Astronomy Lecturer of *Gresham-Colledge*, and a Member of the *Royal Society*, affirms, that he had long since eat of them at *Westchester*, and concluded them to be of the same kind he had met with in *Italy*.

2. *M. Henry Wynn*, Mathematical Instrument-maker in *Chancery-Lane*, who hath some concerns in *Wales*, went thither last year, where he eat many of them, and found they did dissolve as *Italian Anchovies*, and proved as good, and many barrels of them were Salted, Pickled, barreld up, and Sold about the Country as such, and were esteemed very good; albeit there they are called by the name of Shads.

The

The said Mr. Wynn affirmed, that Doctor Lloyd, the late Bishop of *Bangor*, had caused many to be caught in a little Arm of the Sea in his Bishoprick, in Summer time, when they are in season and arrive, which were salted up; and recommended me to his Lordship to be informed of the truth thereof, who courteously received me and affirmed, he had brought up some Gally-Pots of them to *London*, and that here as his Servants well knew, they were concluded to be right Anchovies; that he had none left, but promised to send me up a Gally-Pot of them, but Death prevented.

4. One Capt. Lloyd, a *Welch* Gent. that Printed a Paper of the Fishery of *Wales*, affirms, that Shads are so common there, that he hath ordinarily caught three or four hundred of them at a Draught, after what manner he saith not.

5. Mr. *Eustace Burnaby*, gave me a few Anchovies out of a Gally-Pot, that he said were caught on our own Coasts and *English* cured; which I carried to some Fishmongers, who approved them to be right Anchovie, that did dissolve for Sawce, though in truth they were somewhat larger and not so red as *Foreign*.

Now having done our remote Summer Fishing, we draw near home to an Autumn and Winter-Fishery.

Of Pilchards.

The sole Fishery thereof in England, is on the Coasts of Cornwall and Devon, the manner of Catching and Curing, with the Inconveniences and Remedies thereof, so well as Mr. Alcorne (without any or but small experience) on suddain Notes taken from him, are as followeth.

1. **T**hey go a Fishing near the Shore on the Coasts of *Devon and Cornwall*, in the Months of *August, September, October.*

2. Director on Shore, by the Colour of the Water espie where the Shoales are, and make signs to the Boats to get into the middle of them. And

And this they are empowred to do in any Mans Ground, by the Statute 1 Jac. 23. which runs thus: In the Counties of *Somerset, Devon, and Cornwall.* it shall be lawful for Huors of Fish to go upon any Mans Ground, near the Sea Coast, to Discover Fish, and for Fishermen to dry their Seames and Nets, without danger of committing Trespasse.

3. The Boats as soon as Laden bring them to a Ware-house on Shore, where they are laid up in Piles, as broad as a large Table, supported with backs or sides.

4. In the Piling of them up, they are salted with Bay-Salt, in which they lie soaking 20 or 30 days together, in which time there runs away much Blood, dirty Pickle and Bittern, which Bittern draws forth much of the Oyle from the Fish, before it comes to the Press, to the great loss of the Undertakers.

5. When they are taken out of Pile, there remains much Salt at the bottom of the Pile, intermingled with much Dirt, Blood and Scales.

To prevent the loss thereof, if they have opportunity, they make another Pile, and use the same with more fresh Salt, if not, it may be presumed they must be content with the Loss, for the Salt is continually wasting, and at last little left but the Dirt and Sand the Salt afforded, and Scales of Fish.

6. Then they wash them in Sea-water, to wash off the Dirt and the Blood.

7. When they are dreyned, they are put into barreles and Pressed, to drive out their Oyle, which issues away at a hole in the bottom of the Cask, and are then accounted fit for Exportation, to *Spain* or other *Southerly* Countries.

The Inconveniences of this Method are,

1. **T**He badness of the Salt, it being incumbered with much Dirt, Sand and Bittern, carries away the Oyle, Goodness and Moisture of the Fish, which is absolutely lost.

2. By reason the Salt is not of a proper size, it doth not dissolve in due time; hence twice as much as need be, is used, and much time and pains lost.

Th. se.

These Inconveniences may be prevented by the use of English refined Salt, made from Brine raised by the Sun, and Embodied by Fire, thus,

1. **I**N half the time of *Article* the 4th. above said, the Brine and Oyle, or Pickle that runs away, having no Dirt in it, may be received in a Well or Receptacle, at the end of the Pile, and what Oyle swims may be scumm'd or taken away, and put into a separate Cask.

2. The remaining Brine having no Dirt or Bittern in it, is of it self a good preservative for Fish, and may be thrown on the same three or four times over, to hasten the dissolving of the Salt, by which means there will be much time and Salt saved.

3. When it becomes Bloody and Scaly, it may be Boyled and scumm'd, and so refitted for further use.

4. When the Fish are washed and dreyned, they are fit to be Pressed as before, and will not have that fiery tast which the Bittern occasions in the former method, and the washing, in regard the Fish are not Dirty, need not be performed in the Sea but in a Storhouse, where one Hoghead of Water or Sea Liquor will wash many Lafts, and may by often use, be made so strong by the Salt hanging on the Fish, that being laved on the Pile, will not only supp'y the use of Salt, but hasten the curing of the Fish, by melting the Salt in which they lay soaking.

Other Benefits arising from the use of Refined Salt.

1. **T**Hose that are caught at the first arrival, may be salted as white Herrings, and kept a year more or less, and will be more acceptable than such Herrings, by reason they are more fat and Oyly; furthermore they may be used for Sawce like Anchovies: Namely, to be minced, beaten, and dissolved in the Sawce, with a digestive gentle or simmering heat.

This

This sort are commonly called *Fumathos*, and so they are denominated in an Act of Parliament, 14. Car. 2. Cap. 28. out of a barrel of this kind which had its Pickle, I had some given me, which were dressed at a Tavern raw like Anchovies, and eat very like them to the great content of the Partakers; whereas a barrel of them sent to a Merchant that had lost their Pickle, proved rusty and naught.

2. They may be cured with a Pickle, and barreld up like White-Herrings; For the reason why in the common Method they press out the Oyle, is because they know not how to cure them in the Pickle, which may be done by Repacking them with dry refined Salt, and the Cask afterwards fed with good Pickle at 6 or 8 hours distance.

3. After the first or a little salting, they may be Deesed and rendred like Red Herrings.

4. In this Method not so much Oyle is drawn out of the Fish, and yet more may be saved than in the former Method.

5. Refined Salt is not of a fiery, dry, burning, corroding, mortifying Quality, rendring an ill tast, but quickly pincheth and peirceth and keeps the Fish cool and moist in a hot Climate, whereby fermentation is prevented.

Of Herrings.

In Mr. Simon Smiths Book Intituled the Herring Bus-Trade, they are thus distinguished.

1. *Sea-Sticks* are such as are caught all the Fishing season, and are but once packt; A barrel will hold 6 or 8 hundred, as they shall rise in bigness, 8 barrels to the Ton by the Law: A hundred of Herrings is to be 120, and a Last ten thousand, we commonly reckon 14 barrels to the Last.

2. There are repackt on Shore, and are called Repackt-Herrings, 17 barrels of *Sea-Sticks* will make from 12 to 14 barrels of Repackt ones. The manner of Repacking is, to take the Herrings out of their Pickle, washing them in their own

Pickle, and so lay them orderly in a fresh barrel, which have no Salt put to them, but are close packt, and headed up by a Sworn Cooper, with Pickle when the barrel is half full, that is to say, with Brine so strong as a Herring will swim in it.

3. *Summers* are such as the *Dutch Chafers* or *Divers* catch, from *June* to the 15th. of *July*; these are Sold away in *Sea-Sticks* to be spent presently, in regard of their fatness, and will not indure Repacking, and so go one with another full and shotten; but the Repackd Herrings are sorted, the full Herrings by themselves.

4. *The shotten and sick Herrings* are put into barrels by themselves, marking the barrel distinctly.

5. *Crux Herrings* are such as are caught after the 14th of *September*. These Herrings are cured with Salt upon Salt, and are carefully sorted out, (all full Herring,) and used in the Repacking as before mentioned.

6. *Corved-Herrings* serve to make *Red-Herrings*, and are such as are taken in the *Yarmouth Seas*, from the end of *August*, till the middle of *October*; provided they can be carried on Shore within a Week less or more after they be taken.

These are never gipped, but rowed in Salt for better preservation of them, till they can be brought on Shore; and such as are preserved to make *Red-Herrings*, are washed in great Fats in fresh-water, before they are hanged up in the *Herring-Hangs*, or *Red-Herring Houses*.

The manner of Salting.

1. **T**He Nets are haled on Board, and the Herrings are taken out of them, and put into the *Warbacks*, which stand on the side of the Vessel and resemble Chests.

2. When all the Nets have the Herrings taken out of them, one fills the *Gippers Baskets*.

3. The *Gippers* cut their Throats, take out the Guts, and sling the full Herrings into one Basket, and the shotten into another.

One

4. One Man takes the full Basket, when they are Girt, and carries them to the Rowback wherein is Salt.

5. One Boy doth Row, and stir them up and down in the Salt.

6. One Boy takes the Row'd Herrings, and carries them in Basket to the Packers.

7. Four Men Pack the Herrings into the Barrel, and lay them one by one streight and even.

8. One Man when the barrel is full, takes the same from the Packer, and it stands one day or rather more open to settle, and that the Salt may melt and dissolve to Pickle, and then fills them up, and heads up the Barrels.

The Pickle must be so strong that a Herring may swim in it, and then it doth so pine, and overcome the nature of the Herring, that it makes it stiff, and preserves it; otherwise if the Pickle be weaker than the nature of the Herring, it will overcome the strength of the Pickle, and so the Herring will decay.

One barrel of Salt will cure three barrels of Herrings, and it is common to allow 2 barrel of Salt in a Last, of 14 barrels to War withall, that is to rowle the Herrings in the Salt before they are Packt.

To the Dutch Laws before mentioned, we may add another made this year, viz. That no Herrings shall be caught after the 20th. of November, being their St. Andrews day.

The great plenty of Herrings round the Coast of Ireland is notorious, one instance whereof we have mentioned in Dublin-Bay, page 67; that there is the like plenty on the Coasts of North and South Wales, is asserted by Capt. Lloyd before mentioned in page 102, because those pidling Boats which the poor and ignorant Fishermen now use, being but of four Tons Burthen, open, and no ways capable to bear the least Storm, yet take sometimes 60 Mesh at a Tide, which are three Lasts of Herrings, and if their Boats would contain one hundred Lasts, they might fill them. Upon these Coasts there are from 60 to 80 of these Boats, and though they catch a great quantity of Herrings, yet ignorance, want of Method and Money, keep them in great Poverty. Moreover he saith 'tis certain that 3 or 4 Buflies or Doggers shall catch more Fish than all those Boats do now; yea and that the Under-

takers shall reap a greater advantage, by the Herrings caught by these Boats, than the Fishermen shall that catch the same.

To promote the Expence of Pickle-Herrings, we recount the ways they are drest.

1. **T**He Dutch cut off the Head, Taile, the bottom of the Belly, take the Rows out, and the Skins off, and then cut them into peices, and commonly eat them with Oyle.

But here we mince them small, and besides the Oyle, put in minced Onions, Lemmon, Apples.

At the House of Signior Dominico an Italian, at the Sugar-Loaf against the South end of Jackanapes-Lane, they are sold ready and excellently prepared without Bones in Gally-pots with Oyle, which upon experience may be thus done, for keeping very well for a Week or longer.

1. The Bones being taken out, chop them very small with some Lemmon-Peele.

2. Take some Onions and pared Apples, cut them small, and Boyl them together till they be soft.

3. When they are cool mix them with the Herrings, with Oyle, Vinegar, and Pepper, and keep them closer in a Gally pot.

These prove excellent to Eat, and may be a good ingredient in some Sawces.

The said Signior Dominico, is noted for the many sorts of Fish, which he *Marines*, or renders *Marinado's*, and for the great Vend thereof, both abroad and at his own House.

Of Baked Herrings.

These are called Virginia-Trouts, and are Sold in many Victualling-Houses at a penny each, and are thus to be Ordered.

1. **T**Hirty or Forty pickled Herrings may be put a soaking into a Pan of fresh-water two days or less, in which time the water is to be changed twice.

2. In the Pan in which they are to be Baked, put in a lay with the head one way, and the tail of the next the other way, and the second lay crosses these in the like manner, &c.

3. Then take a Pint of White-Wine-Vinegar, a Pennyworth of Cloves and Mace beat together, half a Pennyworth of the Powder of Saunders, and a couple of Onyons minced or cut small, put these into the Pan, and Baking it with the Wifes Bread, the Bones will be found dissolved, except the Backbone, which will be very Crisp.

4. When cool, they are fit for Eating, with a Spoonfull of their Pickle mingled with Elder-Vinegar, and if to be kept, cover the Pot close.

Some after they are done, eat them without their Pickle, mashed small with some Lemmon and Oyle.

Of Bloated and Dried Fish.

Divers Summer fat oyle Herrings arrive, a Month before we have any from *Tarmonth*.

These the Fishmongers say are bloated as followeth, to wit, they sink them 3. or 4. hours in a Brine, made strong as hercafter mentioned, and then hang them up a drying in Chimnies, and 'tis said they will keep a Month and are very acceptable, namely when they are to be spent (after the manner of Larkes,) they thrust a Spit through their Gills, and hang them near a Fire, sometimes changing the Spit.

Spit end for end, to serve in the nature of Broyling on a Gridiron, or the Coals, to which it is much to be preferred; when these are thorough Roasted (pardon the Simile,) they are put into a Dish with good Butter and an Anchovie and a Shellot dissolved, and then served in.

After the same manner I have eat Herrings, Mackarel, Whittings, &c. which proved very good, solid, like barrel-Cod.

To mend the method aforesaid, a Tin frame might be used and placed in a Chimney, in the form of a Cupboard, but without a bottom; with two Doors, the one at the bottom (with a Pidgeon hole in it,) to open and make a Sawdust and Small-Coal dust Fire, to be kindled or enlivened with Straw, and to draw in Air at the hole aforesaid, which might have a little Door to prevent Cats.

The top of this Cupboard to be firm Tyn, with a Nossel or Snout in it of Tin like that of a pair of Bellows, covered over to prevent Soot, to which and on Ledges athwart divers hooks to be hung, whereto to hang the Fish, Sheeps and Hogs Tongues, Bononia Sawcedges, &c. to be dried.

And after this manner the Fishmongers may preserve much Fish, they can neither sell nor spend, provided it do not stink before they use the Remedy.

Of Thornback, Maids, or Skate.

AT Whitby in Yorkshire, Robin-Hoods Bay, &c. and in some parts of Cornwall, there is much of this sort of Fish caught in Summer-time, which they cure by only drying.

To wit, the Fish being slimy they drag it on the Sands, split it, take out the Guts, and hang it a drying in the Sun and the Wind; sometimes if the Weather be too moist, it may be annoyed by Flies and Maggots, to prevent which, one that had experience adviseth, to strew on the Dust of East-India-Repper, which may be had at a Penny or three half pence a pound, and how well it mingled with Salt might save some kinds of Fish, might be an experiment the East-India Company might have tried with little Charge.

At

Of Bloat'd and Dry'd Fish.

III

At *Whitby* also I am inform'd, they make much *Flaberdine* of Cod caught in the *Offing*, salted with *Newcastle Salt*, and then dried in the Sun and the Wind, and 'tis said it proves very white and good.

'Tis also affirm'd, they barrel up some Herrings salted with that Salt, and abundance of young Cod or Codlings which are brought to *London*, to supply the want of barrel'd Cod, which ought rather to be spent.

And this I should have insert'd sooner, to wit in page 13, but had no account of it, from those whose interest might have induc'd them to have imparted it.

Of Conger Eeles.

They are in the Coasts of *Cornwall* of a very large size, even a heavy Burthen to a Woman to carry, they are often found in Pits on the Sands when the Sea is out, and in regard they cannot retire are there caught, carried on Shore, splitted and gutted, and then so long dried in the Sun, that they may be reduced to a Powder, which goes off in *Portugal*, &c. and serves instead of Oatmeal; many miscarry in the drying as proving full of Flies and Maggots.

Of Fresh and Barrell'd Cod.

The Catching of them is best performed in Vessels, called *Doggers*, burthen about 80 Tuns, with a Well like a Cullender in the middle, into which to put the live Cod, to bring them to the Shore, or Rivers Mouth; in which, without any sustenance, (which they refuse being in Captivity, they will live a fortnight, or longer, in Salt Water, but presently dye in fresh-Water.

The manner of Catching may be such as is described in Page 87. but some of our own *Doggers*, and the *Dutch*, (who have out this Winter 220 *Doggers*,) catch them in the manner following; namely,

Each

Each Dogger is furnished with 100 Lines, of 150 fathom long, each; which are bigger than *Hamborough*-Lines, or somewhat less than an Inch about.

To each of these are fastned 20 Snoods, *alias* Nossels, which are small Lines, with Hooks and Baits at them; the Baits about *Michaelmas*, (when this Fishing begins,) are Herrings, with which they may bait till the end of *November*, afterwards till *Lady-day*; (when this Fishing ends,) they bait with *Lampernes*.

The places where they are commonly caught, are upon Banks, where the Dogger may Anchor, the Principal is called the *Dogger-Bank*, against *Flamborough* Head; the manner thus: The Dogger being under Sail, Sails to Windward, and Veres, or Shoots these out at her Stern, all fastened one to another, with 12 Can-Buoys to them all, and an Anchor to each Buoy, to catch hold in the ground, with Ropes to weigh them, fitted to each, suitable to the depth.

Moreover, there is a great Buoy at the hither end, called the *Ships Buoy*; when all are Veered out, the Dogger comes to an Anchor, and Veers out her Cable, to which the former range of Lines is fastned, and after she hath rid 10 or 12 hours, (beginning commonly at Night,) they begin to hale in their Lines, which they may be 6 hours in performing, and sometimes meet with a great draught of Cod, that which they catch first, or such as die in the Well, they Salt and barrel up as soon as they are dressed, and prepared for salting, as before mentioned in page 88.

They salt them well with refined Salt, laying them Circularly round the barrel with the Tails towards the middle, where to supply the Descent, a whole Cod is laid in; between each lay of Fish they put in a Lane of Salt, and so fill up to the Head which is well covered with Salt, where after 24 hours time they will settle and make room for more; and when the barrel is full they head them up full of Pickle, and they are sufficiently cured for these Climates.

These are acceptable in Foreign Countries, where it is customary to dress them with Oyle, and that because they are not over Salt, are firm, white, have a good tast, and will keep long.

Whereas

Whereas should they be cured with *French Salt*, they would become dirty, yellow, and so mortified or pyned, that they are of no long Continuance.

If they are to be long kept, and carried into a hot Country, they ought to be packt very close, with more Salt between each Fish than is usual, filling up the Cask at the top with Pickle, or rather may be Repackt with fresh Salt and Pickle; as is mentioned in page 90.

Roes of Cod well Salted and Pickled are here neglected, but are said to yield a good price in *France* to make Sawce withall.

When the same are to be used, bruise them betwixt two Trenchers, and beat them up with Vinegar, White-Wine &c. then let them stew or simmer over a gentle Fire, with Anchovies and other Ingredients used for Sawce, putting the Butter well beat up thereto: We our selves on the Coasts use the Roes of Fresh Cod for Sawce.

The *Dutch* and *Danes* are said to bring home from *Iceland*, whole Ladings of Roes to put into Ponds to feed Fish withall, and sometimes they are bruised and thrown into Rivers, to raise the Fish.

O

T H E

THE COOKERY, O R Dressing of Fish.

There are many other excellent sorts of large Fish, which might be treated of, as Ling, Mullet, Halybut, Had-dock, Turbut, Sturgeon, &c. But these being scarce on our Eastern-Shores, I am willing to defer what I have to say, till an other Edition, and proceed to the Cookery part, as judging it but necessary after such a Harangue of Catching and Curing of Fish; and herein I am beholding to Mr. John Bull for the following Receipts, it being well known that he served an Apprenticeship to a Cook, and hath been eminent for his Skill therein, which he hath put into Practise for about 30 years together.

Stockfish

BEat it soundly with a Mallet for half an hour or more, and lay it three days a soaking, then Boyl it on a simmering Fire about an hour, with as much water as will cover it till it be soft, then take it up, and put in Butter, Eggs, and Mustard champed together, (otherwise take 6 Potatos (which may be had all the year at Seed-shops;) Boyl them
very

very tender, and then Skin them. Chop them, and beat up the Butter thick with them, and put it on the Fish and serve them up. Some use Parsnips.

The like for Haberdine and Poor-Jack, I should be ashamed of this Receipt if we had no better to follow, and think it too mean to mention any thing about Green-Fish or barreld Cod, but the watering or soaking before they are Boyled.

Oysters.

The Description of the Nature, Generation, and Ordering of Green Oysters, commonly called Colchester-Oysters; the Reader may meet with in the learned Doctor Sprats History of the Royal Society, page 307, &c. these raw being a general ingredient in what follows, obtain the precedence in Discourse.

To Stew Oysters.

Those that are most fit and commonly Stewed are large Oysters, some of which in opening bring away part of the Shell, and sometimes some Dirt; to get quit of which, take them in your Fingers one by one, and wash or gently rub them in their own Liquor, mingled with a quarter of a Pint of Elder Vinegar, putting them into a Stew or Sawce-Pan, into which put their own Liquor, after it hath been Streined (to cleanse it) with an Anchovie and three or four Cloves, and let them Stew or simmer over a gentle Fire till they are enough, which may be in half an hours time, and when that's done, take a quarter of a pound of Butter melted apart with a Shellot, which put into a Dish with them and serve them up.

To Fry Oysters.

TAKE a quart of Oysters out of their Liquor, and wash them in it as before.

Then strain their Liquor, and simmer it up with an Anchovie; take three yolkes of Eggs, beat them up in a Porringer with a little Water and a little Flower, dip the Oysters into it, and they will resemble Fritters; then put them into a Frying Pan which comes hot from the Fire, covered with hot Beef-Suet, in which fry the Oysters. then put them into their Liquor, simmering as aforesaid with an Anchovie.

To pickle Oysters for divers Months keeping.

LET a quart of Oysters stand a little while after they come out of their shells, then take them out of their Liquor, and wash them in fair water, then put them into a Sew-Pan with their own Liquor, a pint of White-Wine Vinegar, a penny worth of Cloves, a little Lemmon or Orange-Peel, and 3 or 4 Coriander-Seeds; simmer them altogether, with a little Salt about the space of half an hour, then keep them close in a gally Pot, and in 4 or 5 days time they will be fit to Eat and look very white.

Otherwise according to Mr. Alcorn.

IN opening put the the Oysters by themselves, and the Liquor by it self, let it settle, afterwards poure it off leaving a sediment behind, then put them together adding thereto Water and Salt, with Bay-leaves, or such other hot Herbs as are best liked, then let them simmer over the Fire so long till the Oyster is of a white Colour, and till the Finn begins to shrivel or contract, then take them off and out of their Liquor, laying them singly till they are Cool, and likewise the Liquor Cool, then put them into Barrels, tite Vessels or Pots well luted, or if into an open Vessel, poure on some sweet Oyle.

This

This for common use, but to render them far more pleasant to the tast, and for longer keeping, instead of Water and hot Herbs, use White-Wine, Mace, or *Pimento, alias Jamaica Pepper*, and if you please a little sliced Ginger, all to be simmered in the Pickle, which may continue longer on the Fire after the Oysters are taken out.

To Stew Salmon.

TAKE a Jowl of Salmon, wash it very clean in an Earthen Pan, put it into a Kettle fit for it, with a Pint of White Wine Vinegar, half a Pint of fair Water, some Lemmon Peel, a bunch of sweet Herbs, a penyworth of large Mace, three Walnut-Tree-leaves (which may be always had at the Seed-shops,) a quart of Oysters with their own Liquor, a Pint of Shrimps, and simmer all these for about an hour till they are enough, and then serve it up with the Liquor in a Dish.

To dress a Cods-head, or a fresh Cod.

TAKE it and put it into a Kett'le, that hath a Cover fitted to it, into which put 4 Anchovies, six Whitings, a quart of Oysters with their Liquor, a Pint of Shrimps, a pennyworth of Mace, two Shellots, and after it hath simmered over the Fire about an hour, take out the two Jaw-bones, put in half a pound of sweet Butter and serve it up. The like for a whole Cod, a Turbut, a Mullet.

To Stew Carps.

TAKE two living Carps, prick them in the Tail with a great Pin, rub the Scales off with a handful of Salt as clean as may be, lay them in a deep Pan, and put to them a quart of Clarret which makes them Bleed, and kills them; open their Bellies and take out their Roes, then put them into a Kettle with their Roes in the middle, into which put a quart of Oysters, two Anchovies, a bunch of sweet Herbs, Stew them

them over a gentle Fire for about an hour, in which time they will be almost enough, and then put in a quarter of a pound of fresh Butter, take out a little of their Sawce, into which put three yolks of Eggs beat up together, then putting altogether in a Dish stir it about and serve it up.

To Stew Soals.

TAKE three pair of large Soals, put a little Salt on the Tail of each, and rub it hard, and the skin will give way to be taken off; scrape the Scales off the Bellies, and wash them very clean in fair Water, dry them with a Towel, and put them into a Stew-Pan one by one, into which put half a Pint of White-Wine, a pennyworth of large Mace, a bunch of sweet Herbs, (to wit, Penny-Royal, Time, Sweet-Marjoram, Winter-Savory,) a Pint of Oysters with their own Liquor, three Anchovies, simmer them over a gentle Fire, and in half an hours time they may be enough: When you take them out of the Stew-Pan, scrape on a little bit of Nutmeg, squeeze on the juyce of a Lemmon, and put in a quarter of a pound of sweet Butter, and set the Fish with their Broth a little while over a gentle Fire and serve them up.

To Fry Soals, &c.

TAKE six Soals and put them into a Frying-Pan hot, with Beef-Suet, there let them Fry about half an hour. The like with six Whiting-Mops, and a quarter of a hundred of Smelts.

In the Liquor in the Pan, Fry a quart of Oysters and likewise drein them, take that Liquor that dreins from the Oysters, and strein it to avoid the Grit and Shells; that done, set it over a gentle Fire in a Sawce-Pan with two Anchovies, and when it comes off, put in a half a pound of sweet Butter, and squeeze in the juyce of a Lemmon, put all into a Dish set over a Chafingdish of Coals, and serve them all up together hot, setting the Soals an end like a Sheaf; as also the Mops, and Garnish with the Smelts and Slices of Lemmon.

Fried

Fryed Maycrill.

SPit them on the Back, put them into the Frying-Pan hot, with Beef Suet, and when Fryed, make a Sawce with Anchovies, a little Butrer, and a little Lemmon.

To Stew Eels.

TAKE six great Eels and put them into a Kettle, with half a Pint of White-Wine, half a Pint of fair Water, a pennyworth of Mace, and a pennyworth of Cloves; hang the Kettle two hands high over a gentle Fire, and let them Stew about an hour or less, then take some of their Liquor and Stew it up with an Anchovie, put it to the Eeles with some slices of Lemmon and serve them up.

Collar'd Eels.

TAKE six large Eels, Boyl them up very well, in a Pint of White-Wine and a Pint of Water, with 6 or 8 Lawrell or Bay-leaves, a pennyworth of Cloves, a pennyworth of Mace, a pennyworth of white-Pepper, a little Salt at top; when they are taken off, put them in a long Pot with their own Liquor which must cover them over; cover the Pot very close and they will keep divers Months.

To make a Broth with Eels, being a Gentle-womans Receipt.

TAKE 12 Eels and put them into a Pipkin, with two quarts of Water a little refined Salt, some whole Pepper, a blade of Mace, half a Nutmeg, a bundle of sweet Herbs, let them Boyl very well, then strein them, and into the Liquor so streined put in a quarter of a pound of Currans, then Boyl it again, and when

when the Currans are Boyled enough, put in a little White-Wine and White-Bread to make it thick, and a little Sugar if you please.

After the same manner Whiting-Broth is made; the Eels themselves are supposed to be so much Boyled, that there is no further use made of them.

To Marine or preserve Fish, as Eels, Flounders, Soals, &c. after the Italian manner, called Marinading, a Receipt imparted by the Worthy Mr. Alcorn.

BOyl the Fish gently, in a Liquor made one half with fair Water, one quarter of White-Wine Vinegar, and one quarter of White-Wine, of which Liquor make so much as will more than cover the Fish, and into it put some Bay-leaves, with such Spice as is best liked; some put in a little Nutmeg with Piemento or Jamaica Pepper, others use Ginger in lieu thereof, then take out the Fish, and let them and the Liquor cool apart, afterwards put them together in a Vessel with Sallad Oyle at top, Time and Rosemary may be likewise used, and they will keep well in the cool for two or three Months.

Divers Sea-Fish may be preserved after the same manner, as Mullets, Sea-Eels, Place, &c.

The same kind of Pickle after it is cool, will preserve cold Roasted-Fowl, as Pidgeons, Ducks, Teal, and Widgeons, &c.

Otherwise to Marine Carps, Mullet, Garnet, Rochet, or Wale, according to a Receipt found in Printed Books.

TAKE a quart of Water to a gallon of Vinegar, a good handful of Bay-leaves, as much Rosemary, a quarter of a pound of beaten Pepper, put all these together, and let them seeth over a gentle Fire, and season them with a little Salt, then Fry the Fish in Sallad Oyl till it be enough, put them into an Earthen Vessel, laying the Bay-leaves and Rosemary between and about the Fish, and that done poure in the Broth aforeaid, and when it is cold cover all close up for keeping.

Directions

Directions for Salting of Flesh and Fish for long keeping, viz. Beef and Pork, according to the common way.

1. **A**N Ox being driven in cool one day, is slaughtered the next, quartered, and after it hath hung a convenient time to cool, is cut into four pound pieces.

2. The same are very well rubb'd with Bay Salt, then put into Bins, Cribs, or Receptacles like Mangers, and almost buried in Salt, for the space of a Fortnight, three weeks, or longer, that the bloody Pickle may run away wast.

3. Then the Meat is again well rubb'd and pack'd or trodden into Cask, on a Cloath or Skin, with Salt betwixt every Lane or Lay, and being headed up is thrown by in Store-houses, for six weeks or two Months time, but sometimes will not keep a Fortnight, which is known by the scent at the Bounge.

4. Then when the same is to be Repackt, they turn the Bounge of the cask downward, that all the bloody pickle may drein away into a wast Curr. nt.

5. Then all the Meat is taken out to be packt into Cask, smelling each piece, which is again well rubb'd with Salt, each lay being close packt with Salt between; and when full is roll'd to the pickling place to be pickling.

The Pickle is thus made.

Diffolve Bay Salt in fresh-water, so long and to such a height, till upon Boyling with a brisk Fire, and scumming off great quantities of Dirt and Filth, it is in a readiness to Kern or turn to Salt again, which is known by a Cream or Ice at the top. Then empty it into Coolers.

6. When the same is thoroughly Cold, often fill up the cask at the Bounge-hole and the Meat is cured.

The Salting of Meat.

Beef and Pork with refined Salt, (made of Brine raised by the Sun) according to the new way.

1. **T**HE Meat is cut out as before.
2. Rub it well every where, strew Salt at the bottom of the Cask, and put in a Lay, which covering with a Skin or Cloath, tread or pack it fast in, sprinkling on more Salt, and so up to the top, where crowd in as much Salt as you can, and head it up.
3. Then fill up the Cask often at the Bounding with Brine, that may search every part.

The Brine is thus made.

Mingle Salt with Water, and let it be dissolving two or three days time, stirring the Salt at the Bottom, and if there be more Salt than the water can melt, it will be found at the bottom, and serve for a second use.

This Brine is at its proper height, when the Salt is but just dissolved, or when a piece of Beef will swim in it, or an Egg the like but half sunk in it.

4. When the Meat is to be carried a long Voyage, through a hot Climate, it were fit it should be close Repacked with dry Salt, for should the Brine be lost by Leakage, the Meat would grow rusty.

The Excellencies of this way above the former, (when there is no Repacking) are,

The Blood and Gravy is preserved, much time, trouble and Salt saved, and the Meat will be little or no saltier at a Year, than at a Months end.

To Salt Beef or Pork with the said Salt for Household Expence.

IF it be a Chine or single piece of Beef, if the same be moist, rub the Salt well on, but if the Meat be dry, dip it into, or moisten it with water, before the Salt be rubb'd on.

Otherwise

Otherwise make a Brine as above directed, so strong as the Meat will swim in it, and there is no more to do but to keep the Meat sunk in it.

This I know to have been the practise with Beef in his Majesties Boyling-House, when he was Prince of *Wales*, and 'tis at present the practise of some Inns of Court and Colledges; here it may be noted, that to keep Meat sunk a day or two, will render it salt enough for present spending, yea and for long keeping, if after the Meat be taken out of the Brine, it be rubbed with Salt, and hung up in a warm Kitchin, see what is said to this purpose in page 6, 11.

After the Brine hath been twice or thrice used, Boyl it over a brisk Fire and skum it, and after it is thorough Cold it will serve again.

I have caused this method of salting of Meat in Brine, to be tried by Mr. *John Bull* afore said (and others) with *Portsea* Salt, on a Loyn and Spare-Rib of Pork, which were both rendred very red; and in Roasting we found the Gravy kept in, and the very skin of the Loyn of Pork to Eat tender: He also sunk a Goose in it 24 hours, which was well seasoned, whereas according to the common method, there should have been about half a pound of Butter, with Salt put into the Body to have seasoned the Goose in Roasting; he likes this way so well, that he much prefers it to the old Custom of dry salting of Meat.

He hath also sunk a leg of Mutton a Night in Brine, that was afterwards Roasted, and then it was well seasoned to be Eat without Salt.

To Salt Bacon with refined Salt.

Rub Salt well on the Fitches, and put them in a Trough, laying the Riny side downwards, and sometimes change the uppermost to lie lowest, and so the rest or middlemost, that the drippings of all may be Communicated. And thus continue for a Fortnights time, and then they must be Deesed, or smoke-dried for a Fortnights time longer, or divers Months, those that drive a great Bacon Trade, raise great Piles with Salt between each Flitch, and much upon the uppermost, and Deese them no faster from time to time than they can find vendat Market.

Martinmass Beef.

IT hath its Denomination from the common time that Country Farmers slaughter their Cattle, which they desire to Salt and dry in large Flitches or Pieces, in a Chimny or Deese, to spend at leasure, which is thus performed; let it be well rubb'd in, or dry salted for 8 or 10 days time; then it may be dield with Wood-smoaks, or in a Chimny Stove with Saw-dust, or on Racks in a Fire or Deefing-room.

The Farmers Boyl it, and eat it with Sallet or Boyled Herbs, or raw Sorrel with Apples and Bread well pounded together, with Vinegar put to it, others slice it and Fry it with Eggs, and if thorough dry, divers eat thin slices of it with Bread and Butter.

To Salt Beef and Neats Tongues Red.

Portsea-Island yields a Red-Salt proper for this purpose, which hath been Sold at a Salt-Warehouse at Puddle-Dock. but without such Salt

Lay the Tongues and Beef in a Tray, and almost cover them with Salt till there be a Brine, then dissolve a small quantity of refined Petre Salt in it; to six Tongues allow half an ounce or more, let the Tongues or Beef lie 12 hours on either side, and it gives it a Redness.

The Beef thus made Red, is either proper for drying, and is then called Hung-Beef, or for Baking to make Collar-Beef, and the Tongues for drying, the manner of making Collar Beef, the Reader may meet with in page 11, of a Book called *the Compleat-Cooke*. And here it may not be improper to make a little Digression.

About

About Salt-Petre.

Which of its self is a saltish Liquor derived from Earth, and we are informed in the *Philosophical Transaction*, N^o 6. to this purpose; that in the *Moguls Dominions* chiefly about *Agra*, and the Villages heretofore Inhabited but now deserted, they derived it from three sorts of Earth, to wit, Yellow, White, and Black, out of which they obtain the best, as most free from common Salt, to this putting water, they tread it into a Pap, that the water may carry away a salt Liquor with it, which afterwards Christallizes into Salt-Petre, then they boyl or refine it twice or thrice over, as they desire it courser or purer, frequently scumming it, till it Christallizes into Salt-Petre, which they put into Earthen Pots, and set them abroad in clear weather, that what impurity remains may subside or fall to the bottom, and afterwards break the Pots, and expose it to the Sun to dry.

In *England*, tubs are filled with dark salt-Earth, got out of Cellars and the Floores of Pidgeon-Houses, &c. to which putting water it dreins away the saltish humour, into another Tub or Receptacle underneath standing under the dripping hole of the uppermost Tub.

The Liquor thus obtained, as also the Salt-Petre brought over by the *East-India Company*, resembling a dull reddish Sand, or course *Muscovado Sugar*, is boyled up to scum and refine the same, as many times as is thought necessary.

That which falls to the bottom of the Pan, is called (as I am informed) *Petre-Salt*, or the Salt of Salt-Petre, it resembles common Salt, hath little or no tast of Saltiness, but is efficacious in turning what is salted therewith Red, as *Neats-Tongues*, *Flogs-Tongues*, *Martinsmas*, and *Collard-Beef*, yea and out of it a Spirit may be drawn as red as Blood, it is commonly sold in Salters-shops at *Billingsgate*, &c. at a reasonable rate, this sort with refining or hard boyling, makes Clods or Lumps and Flakes which are as big as *Loaf-Sugar* or *Allom*, which sort being much the dearer, is also used by some out of ignorance, (though not improperly) for the salting of
Neat

Neats Tongues, &c. as aforesaid, this sort is commonly sold by Druggists under the name of Salt-Petre refined, the expence of the Salt of Salt-Petre being but small, the Owners or Employers commonly give it the Workmen.

The other Liquor in the an at the same time boyled to a due Consistency, exposed to the cold will shoot into Christsals, which they take off and put into flat Brass Pans, where it granulates of it self and makes Gunpowder for Ordinance.

And if the Liquor be refined to a greater height, it serves to make Powder after the same manner for Pistols and Fowling-Pieces.

The main difference betwixt them is, that Salt-Petre is Volatile and takes Fire, the other fixt and void of such quality.

We have Salt-Petre also from *Barbary*, but it is fouler and leaves a greater quantity of fixt Salt than that we have from the *East-Indies*.

I have heard it asserted in his Majesties late Council of Plantations, that enough and good Salt-Petre may be had from *Montserrat*, &c.

Salt-Petre Salt as to goodness hath no great Repute, yea common Salt mingled with Urine, Lime and Earth, cast up and kept in Banks for six Months or longer, much increaseth Salt-Petre; whence 'tis probable that our Sea-Muds mentioned in page 19, may yield good quantities of Salt-Petre.

In a Printed Letter of Mr. *Gabriel Plas*, to Mr. *Samuel Hartlib*, we read the Author asserting, that he knows by experience that Salt-Petre is the most rich Compost in the World to multiply Corn, and that he hath seen fifty pounds worth of Salt-Petre extracted out of a Vault at *Dowgate* not very spacious, which was formerly a House of Office, and not emptied, till the matter was thoroughly rotten. And seeing *Sal-Armoniack* yields a good rate in *England*, namely about half a Crown a pound, and is much used by *Dyers*, *Tinmen*, &c. and may be made here of Salt, &c. I shall also digress a little about the same, and insert a Paper imparted by the Learned Chymist Mr. *Molt*, to Mr. *Dacres* a Druggist in little *Lumbarde-street*, viz.

Sal-

Sal-Ammoniac.

THe name of Ammoniac is given to this Salt, from the Temple of *Jupiter*, *Ἀμμῶν*, or *Ammos*, Situated in the midst of the Desarts of *Lybia*, because this Salt was formerly found sublimated upon the superficies of the burnt Sands of that Country.

The Urine of *Camels* that generally travelled that way in *Caravans*, in the *Pilgrimages* that were continually made to this Temple, was the first and principal Matter, and the acid Salt of the Air, which impregnated this Salt in the Night time, by its Union stopped the volatile Parts, which the heat of the Sun had otherwise dissipated; but having not this Salt of the Ancients, we are forced to use this fictitious Salt made thus.

Take 7 pound (or Pints of Urine,) one pound of common Salt, and two pounds of Wood-Soot, beat the Salt and Soot to Powder and put them into an Iron Pot, pour the Urine off them, boyl it to dryness, then beat the dry Mass and sublime it according to Art.

That I take to be meant of putting it into a Crucible, and evaporate or burn away the Moisture.

COOKERY of FLESH.

Many House-Keepers may meet with this Book, to whom possibly the following Receipts may not be unwelcome.

To pickle Cucumbers the way usual amongst Oyle-Men.

Buy a thousand Cucumbers of such we call long-*English* (not *French*) Seed, (these are about thrice as dear as the ordinary ones:) wash them very clean and lay them dreining in a Sieve, put them into a Pot or Vessel in lay, to wit
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at the bottom, and between each lay diſtribute about ſix pennyworth of Dill and Fennil, then make a Brine of refined Salt, with five gallons of Beer or Rape-Vinegar, (for White-Wine is too corroding) ſo ſtrong that it will bear an Egg, in which diſſolve three ounces of Roach-Allom, then poure this pickle among the Cucumbers in the Pot or Veſſel aforeſaid, which cover cloſe or head up, and therein they may lie from three Weeks to ſix Weeks, then take the pickle out, boyl it on a brisk Fire and ſcum it, and put it in again to the Cucumbers hot which cover cloſe as before, and upon experience 'tis well known they will keep long and be green; if they be not green enough, boyl the pickle again, and put it to the Cucumbers as before.

Moſt excellent Cucumbers, large and ſoft Red-Herrings, ſuch as are deſcribed to be good in page 67, with Rape and Elder-Vinegar, are to be had at the Shop of Mr. *Joſeph Pierce*, Oyleman at the Sign of the *Swan* at *Holbourn-Bridge*.

To pickle Cucumbers otherwiſe, according to the Receipt of Mr. John Bull.

TAKE ſix pennyworth of Dill and Fennel, an ounce of Coriander-ſeed, two pennyworth of Cloves, two pennyworth of Mace, an ounce of white-Pepper, two ounces of Ginger, and about 4 gallons of Elder-Vinegar, (that is to ſay Beer or Rape-Vinegar, with the white-flowers of Elder ſteeped in it, to be had at about a Groat a gallon at Still ſhops :) a handfull of Walnut-Tree-leaves, to theſe put a gallon of pickle made with Salt and Water ſo ſtrong that it will bear an Egg, boyl all theſe together, and let it ſtand while it is cool, then put it into a Pot, with 1000 Cucumbers as aforeſaid well waſhed, and they will be good in few days; after a week, or more the pickle ought to be taken out, boyled, ſcummed, and put in again.

To pickle Samphire.

The Iſle of VVight yields plenty of it, and the Port-Sea Saltworks moſt excellent, as is mentioned in page 32, which Mr. Alcorne pickleth in the manner following.

1. **M**ake ſuch a Liquor of Water, Elder-Vinegar, White-Wine and Salt as is pleaſing.
2. Let the *Samphire* be ſcalded in it, and when the Veſſel is taken off, cover it with a Cloath to keep the ſteam in for a quarter of an hour, and it will be tender, but if it be required hard, and not to be boyled again, cover it not at all.
3. Then take the *Samphire* out of the Liquor, and let both cool by themſelves, and afterwards put them up in a Veſſel cloſe covered to keep for uſe.

The Herb may be preſerved without ſcalding, but when it is to be uſed, it muſt be boyled.

To pickle Purſlayn.

Take Purſlayn with their Stalkes, and boyl them tender in fair water, and lay them a drying or ſoaking, when done, put them into a Gally-pot, and make a Brine with Salt and Elder-Vinegar to put to them, ſo as to cover them, and keep the Pot cloſe ſtopt.

To make a Leg of Pork ſerve inſtead of a Weſtphalia Ham.

Cut it long like a Weſtphalia Ham, beat it very well with a Rowling-Pin, then put it into Brine (as before deſcribed page 122,) eight Days and Nights, then hang it up a Week a drying in a Stove, as is mentioned in page 110, and when to be uſed, Boyl it.

To Stew Beef Steaks.

TAKE three pound of any good Beef, beat it well with a Rowling-Pin, and put it into a Tin-Stew-Pan, (of which those that have double bottoms are durable,) with half a pint of Ale, and half a pint of Clarret, with a shred Onion, and set it at two hands distance over a gentle Fire, and when it is half ready, which may be in half an hour, put in a blade or two of Mace, a bunch of sweet Hearbs, an Anchovie, and when ready, which may be in half an hour or more, take the Liquor out, and put into it a little fresh Butter, Nutmeg, and the juyce of a Lemmon squeezed on it, and serve it up.

To fry Tripes.

TAKE a good fat Tripe, and sowce it three days in a salt Brine as before described, then put it into a Frying-Pan of hot Beef-Suet to be scalded, when that's done, take out the Tripe and cut it into slices, then dip them into a Batter made of a penyworth of Flowr, and six yolks of Eggs beat up in a Porringer, afterwards Fry it, and serve it up as hot as you can.

To make Pease Pottage.

Going to VVestminster sometimes, I meet with a dish of such as are very pleasing, possibly as good may be made by some of the following Receipts.

TAKE a quarter of a peck of dry blew Pease, and boyl them with a piece of Bacon, and some dryed Mint; when they are half boyled, which may be in an hour throw in a quart of cold Water to break them, and if they be too thick, put in more; take a Cullender and strein them through it, then take a hand-
ful

ful of Sorrel, a handful of green Spinnage, ſhred them a little, put in an Oynion with ſome Cloves ſtuck in it, a little Pepper, Salt, and Lemmon Peele ſhred, put all theſe into a Skillet, boyl altogether quick up, which may be done in an hour more, and ſerve them to the Table with the Bacon in.

White Peaſe Pottage with Balls.

Boyl a quart of white-Peaſe mingled with Mint, in a little quantity of Water, till they are broke, and ſtrain them through a Cullender, leaving the huſks behind, to which ſo ſtrained, put a quart of new Milk.

To make Balls to put into them.

Take half a pound of lean Veal, half a pound of Bacon, a little Beef-Suet, a few tops of Time and Winter-favoury, ſhred them altogether very ſmall, grate in a Nutmeg, put in a raw Egg or two, work them well up, and boyl them by themſelves, in a little of their own or Beef-Broth, then take ſome thin ſlices of Bacon, Fry them, and put them into the Peaſe-Broth and Milk aboveſaid, with a little beaten Pepper, Cloves and Mace, a piece of Butter, two or three ſlices of Ginger, a little Lemmon-Peel, and three Anchovies ſhred ſmall, a *French-Roul* in ſlices, and boyl all up together, and if it prove too thick, put in more Milk, with two or three ſlices of Lemmon.

Peaſe Pottage, with a ſtrong Broth, according to Mr. John Bull's way.

Take a ſhin of Beef, and a knuckle of Veal, boyl them in water ſufficient, with Cloves and Mace, 4 or 5 hours, till they are tender, then ſtrain that Liquor apart, giving the Meat to the Poor; and into it put 4 quarts of white-Peaſe, and boyl them therein, with ſweet Marjoram, Penny-Royal, and Spearmint a pennyworth of each, and when the Peaſe are

almost boyled, or rather have simmered an hour, put in a little minced Charvil mingled therein: Lastly, strain them, and serve them up.

A-La-mode (or Larded) Beef.

TAKE six pound of Buttock-Beef, beat it well with a Rowling-Pin, and let it lie one Night in a Brine (made of Salt and water as before,) then slice the Beef and a pound of Bacon, put them into a Pot in Lays, with some Cloves, Mace, Cinamon, Nutmeg, and some sweet Herbs shred betwixt each Lay, (to wit,) Penny-Royal, Time, and Winter-savoury.) Lastly, put in a pint of Ale, and let the whole be Baked with the Wifes Bread. This will have a Jelly about it, and may be eat cold, or hot if stewed upon Embers.

Potted Beef to serve instead of Potted Venison or Fowle.

TAKE six pounds of Buttock Beef, Parboyl it, also take six pounds of Beef-Suet, and put them one Night in pickle (as aforesaid,) next Morning beat them hard with a Rowling Pin into a Mash, then take Penny-Royal, sweet Marjoram, Time, and Winter-Savoury, to the value of two pence, and Cloves, Mace, and white-Pepper, to the value of a penny each, mingle all these together, strew them on the Meat, and Bake it gently in an Oven; when it comes out, take it from its Gravy, and Pot it up with Butter on the top for keeping.

To Stew a Fillet of Veal.

CUt it into 20 or 30 slices, and lard them all with Bacon, on which, strew on a little minced Time, and Penny-Royal, put them into a Stew Pan, with a blade or two of Mace, a pint of Oysters with the Liquor in them, two or three Anchovies, a Shellor, a pound of Sawfedges, and stew or simmer them

them over a gentle Fire, and when they are enough, which may be in an hours time, take them out and Diſh them, and put in a pound of freſh Butter, ſtrew on ſome Lemmon and ſerve them up.

To Roaſt a fillet of Veal.

BEfore it is laid down, ſtuff it with Balls made of ſome of the Knuckle, chopt very ſmall, and mingled with yolks of Eggs, ſweet-Herbs, and Spice beat all together; in the Roaſting throw on a little Floure, and when 'tis Roaſted enough, ſerve it up with ſlices of Lemmon, and Anchovie Sawce, to wit, ſimmer two Anchovies in a little White-Wine.

To make a Leg of Veal ſupply the want of a Shoulder.

TAKE the brawn and cut it over the Knuckle, and ſewer it up, take a pennyworth of Penny-Royal and Time, a pennyworth of Cinamon and Cloves, half a pound of Beef-Suet, a Pippin ſliced ſmall, chop all theſe together with four yolks of boyled Eggs, beat them all up together with a little fair-Water, and a pennyworth of White-Wine, and a little Flour to harden them, with a little bit of Nutmeg, make them into little Balls like Nutmegs, and make holes with your Knife in the Meat, and put or ſtuff them in, and when Roaſted, ſerve it up with Anchovie Sawce, and a little Lemmon.

Minced Beef to Eat with Spoons.

TAKE two Ribs of Beef which may weigh about ſix pound, cut the Meat off the Bones, and chop it very ſmall, and put it into a Stew-Pan, with a pound of Beef-Suet minced ſmall, into which put the following Ingredients, namely two pennyworth of beaten Cloves and Mace, ſix corns of white-Pepper bruifed, half a great Oyunion minced very ſmall, a farthing-

farthingworth of Time, the like of Penny-Royal, both chopt very small, half a pint of White-Wine, a pint of fair-Water, two Anchovies, let them simmer an hour over the Fire, and when done, squeeze in a Lemmon, and throw on a little grated Nutmeg.

A Pottage.

TAKE a knuckle of Veal, a shin of Beef, 12 Cocks-heads washed in hot water, then scald them, split their heads, pick off their Feathers, and take out their Eyes; moreover take 6 Gizards of Pullets, 2 pound of Sawledges, a pint of Oysters, a blade or two of Mace beaten, a pound of Bacon in little slices, an Onion, and a bunch of sweet-Herbs both cut small, a pint of White-Wine, and three quarts of fair-Water, put all in a Pot close covered, simmering over the Fire above an hour, then take out the Beef to give to the Poor, the knuckle of Veal (which will turn to a Jelly), and the Sawledges are to be put in the middle of the Dish, with the Broth, into which put a penny-Rowl grated.

A Frigacy of Rabbits or Chickens.

TAKE two Rabbits, quarter them, break all their Bones, clap them into a large Frying-Pan with a Cover, into which put a pint of White-Wine, a pint of fair-Water, half a pound of Bacon thin sliced, two Anchovies, a small bunch of sweet-Herbs to the value of a farthing, chopt small, two pennyworth of Capers, let all these simmer or gently Fry an hour, then take half a Porringer of the Broth, beat it up with the yolks of six boyled Eggs, put all in a Dish, and squeeze on the juyce of a Lemmon,

Hung-Beef.

TAKE ſix pound of the leanest Beef that is, beat it very well with a Rowling Pin, put it into Pickle or Brine, as described in page 122, eight days, take it out, and dry it very well with a course Cloth, sprinkle upon it a pennyworth of beaten Cloves and Mace, put a string through it, and hang it up three weeks in a Chimney over a Wood or Sawduſt Fire, till it be thorough Dry, this is to be cut into very thin ſlices to cover Bread and Butter with, and ſo Eaten.

The Stove mentioned in page 110, is more proper for this Work than a Chimney.

To preſerve a Breast of Veal in Pickle for three Months keeping in the Summer-time.

TAKE as much Spring or Conduit Water as will cover it, let it Boil, and then take it off and let it cool, take two quarts of that Water, a quart of Elder-Vinegar, a pint of White-Wine, ſome Lemmon Peel, a pennyworth of whole Cloves and Mace, a ſtick of Cinnamon, put all theſe together and boyl them, and when it is cold, put the Breast of Veal into an Earthen Pan, and cover it with this Liquor, into which put half a handful of Salt, cover it up cloſe, and it will be fit for Eating in a Week, or for keeping three Months as aforeſaid.

To preſerve a Haunch of Veniſon that will not keep.

DIG a hole in the Garden or Celler, and put a Colewort leaf under it, and another above it, and cover it over with Earth for 24 hours time, and when you take it up, ſtuff it with Beef-Suet chopt ſmall, mingled with a pennyworth of ſweet-Herbs, to wit, Penny-Royal and Time alſo chopt ſmall, with a little bit of Nutmeg grated amongſt them, and then it may be either Boyled or Roaſted; if Boyled, it wants no Sawce, if Roaſted, the Sawce following may be uſed, viz.

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A penny Loaf grated and put into fair water, with a stick of Cinamon, a sprig of Rosemary, a pennyworth of Red Wine, boyl all these up, put them in a Dish, with a bit of sweet-Butter, and a little Sugar, into which lay the Meat, and serve it up.

To make Bononia Sawfedges.

TAKE 6 pound of Buttock-Beef, 6 pound of Pork (Belly-pieces,) pare it off the Ribs, let all this simmer or Par-boyl over a gentle Fire about an hour, then take three pound of Beef-Suet, three pennyworth of Cloves and Mace, a pennyworth of Nutmeg, as much Salt as will just season them, of Sage and Penny-Royal a pennyworth, a half-pennyworth of Time, a pennyworth of beaten Cinamon, mingle the Meat and all this together, chop them small, and put them into Ox or Cows-guts prepared, and dry or smoak them 3 or 4 Days in a Tin-Stove, such as is mentioned in page 110, over a Sawdust Fire.

To prepare the Ox-Guts.

WHEN they come hot out of the Beasts Belly, put them into fair-Water and Salt, cut them into several pieces and turn the inside outwards with a Stick, for 3 or 4 days together washing them untill they are rendred white, then put in the Flesh and tie them up.

Guts that are to be Exported after they are washed, ought to be Salted and Pickled.

Sawfedges thus made are (without any other dressing) to be Eat cold with Mustard. One, like a Hogs-Pudding that costs but 3 pence, may serve as a Relishing-bit to 3 Persons in a Tavern; I reckon 4 of them to contain more, and better Meat than a cold Neats-Tongue, and believe they will become common.

☞ These with Sheeps, Hogs, Neats Tongues, Hams, Bloated-Fish, &c. are to be had of Mr. *John Bull*, mentioned in page 114, who keeps an Ale-House near the Fleet on the East-side.

Of

Of Butter.

DIvers abuſes committed in the Packing and over-Salting the ſame to make it weigh heavy, occaſioned a Law to be made for redreſs in the 14. of Car. 2. Chap. 26. where we find the Complaints are of this Nature.

1. *Fraud committed in the Packing up bad and decayed Butter, with ſound and good, in Veſſels and caſk unuſal, and called by wrong Names; a Kilderkin weighing from 26 to 28 pounds, a Firkin from 10 to 14 pounds, the Pots from 7 to 9 pounds.*

2. *And theſe irregularly weighed with Stones, Iron-Wedges, Bricks, and other unwarrantable Weights.*

3. *Hence the Commodity (whereof much is transported beyond the Seas) lies under a bad Repute, abroad and at home, becomes a great abuſe to his Majeſty in the Viſtualling of his Navy, Merchants in Viſtualling their Ships, and to Houſholders who buy the ſame for their Expence; For redreſs whereof it was Enacted, That after the firſt of June, 1662.*

1. *Every Kilderkin ſhall weigh 112 l. neat or above Averdupois, beſides the tare of the Caſk.*

Every Firkin 56 pound beſides the weight of the caſk, and every Pot 14 pound beſides the weight of the Pot, all of good and Merchantable Butter.

2. *That no Butter which is old or corrupt, ſhall be mixed or packed up into any Kilderkin, Firkin, or other Caſk, Veſſel, or Pot, whatſoever with any Butter which is new and ſound, nor any Whey-Butter, ſhall be packed or mixed with any Butter that is made of Cream, but to be packt ſeparately, ſo that each caſk or Pot of Butter, ſhall be of one ſort and goodneſs throughout.*

3. *No Butter to be ſalted with any great Salt, but all to be ſalted and ſavoured with ſmall Salt, nor ſhall more Salt be intermixed with it, than is needful for its preſervation, upon pain of forfeiture of the Butter false Packt, and ſix times the value of what ſhall be wanting in weight.*

4. *Cheefmongers and others ſelling Butter, ſhall deliver the full quantity of Kilderkins, Firkins, Caſks, and Pots, and the due quality thereof, and none ſhall Repack Butter for Sale, upon forfeiture of the double value for ſuch Repacking.*

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5. *Farmers and others shall pack their Butter in sufficient and well seasoned Casks, which shall be marked with the first Letters of the Christian Names, and Sir Names of the Sellers, and the weight of the Butter, upon Penalty of forfeiting Ten-shillings for every hundred weight of Butter not so marked.*

6. *Potters shall mark their Pots, with their Names and the weight of the Pot, and set the first Letter of their Christian Name, and Sir Name, upon pain for every default 12 pence; and Farmers shall not sell Butter packed in other Pots, upon pain of two shillings for every default.*

One half of the Penalty to go to the Poor of the Parish, where the Offence is committed, and the other half to the Profecutor; and all Suits on this Act to be commenced within four Months after the Sale of such Butter.

The frequent complaints our Fishermen make, of the badness of the Butter they carry with them, have occasioned these Recitals.

To preserve Butter fresh for long keeping.

MAKE a Brine as before prescribed, and keep the Butter sunk in it.

About the beginning of *May*, I caused this to be put into Practice, and potted up many Lumps of Butter, bought fresh out of the Market, and they all kept sweet, fresh, good and well tasted till about *Michaelmas*; at which time the Brine eating through the Pot, they were spent, and more bought and packt up, with an intent to be kept till *May* next: The Reader may be informed of the truth of this Experiment, by divers credible Witnesses, at a *Plummers* on *Garlick-Hill*, where it was performed.

And here it is not amiss to intimate, that Jug-mettle is much more durable than other sorts.

Of Eggs.

I Am credibly informed that Eggs have been packt up in a Barrel of Salt, that the same have kept good to *Jamaica*, and some time after the Ships arrival there, they using to rowl or turn the Cask, whereas others packt in Meal or Flour, quickly became musty.

Extraordinary Experiments in preserving Butchers Meat, Poultry and Fish without Salting.

1. A Leg of Mutton bought fresh out of the Market, bath been Buried about a quarter of a year in a heap of hard dry *Portsea* Salt, and then taken out, proved very sweet, good, and fresh, and being boyled, made fresh Broth.

Of this Mr. Pen, at an *Alchouse* at the West-end of *Thames-street*, and Mr. *Tisdell*, a Waterman that Plies there (and others,) can make full proof, as having been at the eating thereof.

2. They inform me also, that a whole fresh Salmon was buried a quarter of a year in a heap of Salt, and came out with good success.

3. Mr. *Alcorne* informed me, that he had caused the Guts of a Turkey to be taken out, a Hair-bag with Salt to be put into the Body, and then the Fowl in its feathers to be Buried a quarter of a year, and then being taken out, stript and Roasted, proved tender, and as sweet, as one fresh from the Shop.

4. He further informed, that a Chine of Beef was Roasted, and put into a barrel of Salt, to carry to the *East-Indies*, to eat cold there, that the Ship stayed some weeks in the *Downs* before She put to Sea; that about the length of the *Canaries*, or somewhat short of it, it was eaten cold, and proved very good, and he doubts not, but it would have been the like at the *Indies*.

5. If a Brine be made of Salt and Water, it is outwardly of a cold Nature, as we have asserted in page 9, and is very proper to put bottles of Wine in, to keep them cool.

6. Forasmuch as old dry hard Salt, preserves what is buried in it, from Frost in the Winter-time, from Heat in the Summer-time, and from Air at all times, it cannot but be very proper to bury in it, bottles of *Florence* or other Wines, Cyder, Oyl, Ink, to keep them from Freezing in the Winter-time.

7. It cannot but be good to preserve divers sorts of Fruits and Roots, as Pyne-Apples, Oranges (wrapt up in Papers,) Hartichoaks, &c.

One *Thomas Marshall*, a Fruiterer, informed me, that he covered a Peck of Pease with their shells, and then covered the shells over with a heap of Bay-Salt, and they kept till the middle of *March*, and might have done much longer.

It were convenient to lay the Salt in a dry upper Room on a Mat, which for preserving of Hartichoaks, might be first strewed with Salt, then the Hartichoaks set in rows, with their tops downwards, then covered over with a Hair-Cloth, and then the Salt poured on.

8. The necessity of preserving Venison and other Flesh, in the heat of Summer, may occasion more Experiments, which I humbly beg may be imparted.

OF THE Canary-Trade.

Before we part with the Reader, it may not be unfit to entertain him with a Glafs of Wine, wherefore let ſomewhat about it enſue.

MAſters of Ships, and moſt Merchants, know it to be a Trade, at leaſt of late, very diſadvantageous to England, and that in theſe Reſpects.

1. That we pay doubt the price, we formerly did for it.
2. That we are mightily over ballanced in this Trade, the Canaries taking off more Commodities eſpecially Fiſh, from Ireland, and leſs from England, than they formerly did.
3. That by reaſon this Trade lies open, every Ship ſtrives to go firſt, and return firſt to Market; hence the Inhabitants knowing we are covetous of this kind of Wine, take the opportunity of enhancing upon us.
4. Which alſo gives them an opportunity of making and vending much bad Wine, made of Grapes, ſome Ripe, ſome Green, ſome Rotten, and this is that ſort which commonly arrives here before *Chriſtmas*, whereas the better ſort comes afterwards.

For proof whereof, I rather cite Authors that have conſidered it, than depend upon other Informations.

In a Quarto Book entituled *Trade-Reviv'd*, Printed in 1659, Page 21, The Author deſires that the Canary Merchants may be called to teſtify, who it is but the Jews that have ſpoiled that Trade, and brought us to pay twenty pounds a Pipe for Canaries, in ready Money (ſilver ſcarce being liked, or able to purchaſe them at that rate, but Spaniſh Piſtols) when as heretofore they were bought by our Nation, trading thither, part for Commodities carried hence, part for time, and part Money at ten pounds per Pipe, to the great accommodation of all that traded into thoſe Iſlands, and the expence of our Manufactures.

The

The Court of Aldermen, and the Merchants in their Petition and Remonstrance to Oliver, in 1658, Published by Mr. Baker, in 1659, represent the State of this Trade as followeth.

1. That the *Canaries* being 1000 Miles from *Spain*, the chief of their dependance and Trade is with these Nations, (meaning *Great Britain* and *Ireland*) for their Wines, except a few Shipt to the *West-Indies*.

2. That the *English* formerly bought these Wines there, at Ducats 28 per Pipe, that is 8 l. 8 s. which with Freight, Custom, and Charges, stood in 13 pounds Sterling, and now the first cost is Ducats 68 per Pipe, that is 20 l. 8 s. The difference is 12 pounds Sterling in a Pipe, so that upon 10000 Pipes yearly Imported as a Medium, we pay dearer in the first Cost, by one hundred and twenty thousand pounds than we did, so that they who were formerly Poor, are now become Rich.

To which adding, that they have doubled their Customs; and imposed a new Duty, since *Blake* was at *St. Cruz*; for Repairing and Maintaining their Castles and Fortifications; he makes our Damage each Vintage a great deal worse.

The Author of *Britania Languens*, an Octavo Book of Trade, Printed in 1680, page 183, thus States this Trade,

Besides to we have vast quantities of Imported Spanish Wines, we also purchased with our Exported Commodities at the rate of 10 l. per Pipe, but now at about 20 l. per Pipe, and mostly with Money, Bullion, and Bills of Exchange, so that 'tis computed that of latter years, it hath cost England near two hundred thousand pounds per annum, in Imported Spanish Wine, over and above the value of our Commodities Exported to the Canaries, from whence he saith are Imported.

About 13000 Pipes yearly at 20 l. per Pipe—260000
 And our Commodities Exported do — } 65000
 amount to but about — } —

Mr.

Mr. *James Boeve*, a Merchant commends this Book, as very useful and judicious, and this I mention to take an opportunity to return him thanks, (which I hereby do,) for a considerable number of Printed Papers, and Books about Trade, which he was pleased to bestow upon me; amongst which one was Published in 1641, by *Simon Smith*, then Agent for the *Royal Fishery*, entituled the *Herring-Buss Trade*, in which Book the Reader may find the *Dutch Laws*, thence cited in page 58, &c. and a judicious account of the charge of a Buss or Dogger, of the Nets, with the manner of their catching the Herrings.

Now the inconvenience of the *Canary Trade* aforesaid being notorious, it is fit to propound the Remedy, *viz.*

That it being but one place, to prevent our selves from undermining one another, which causeth them to enhance upon us there.

1. That the Trade thereof be restrained to one sole Company, and after others at present concerned have had some competent time for clearing their Debts, and concerns, none but those of the Company, to have any freedom of Trade thither.

2. That for as much as this Trade may be highly instrumental to promote the Fishery of *England* (as follows,) it be restrained to the *Royal Fishery Company*.

3. That such Company raise a sufficient Stock to carry on this Trade, which may be *four* thousand pounds more or less, as shall be thought requisite.

4. That every one that pleaseth have liberty to bring into this Company a Stock, not exceeding above

5. That for every thousand pounds so put in for the *Canary Trade*, he be obliged to bring in one hundred pounds as a Stock to carry on the Fishery Trade.

Hence the Fishery will be supplied with Adventurers.

Hence if the Fishery be well encouraged, they may have Ships belonging to them, which may be employed all the year round thus.

1. In the Summer-time, they may be set out to *Greenland*, to be employed in the *Whale-Fishery*, which we have either quite lost, or most strangely decline in.

2. VVhen

2. When they return, they may be gone to *Portugal, Spain,* and the *Streights*, with Herrings, North-Sea-Staple Cod, &c. and with such other Freight as they can get.

3. And from thence set forth to the *Canaries*, and return with Wine, when it is reduced to a reasonable rate.

Against which it will be Objected.

1. That it will displease the *Spaniards*.

2. That no Wine is so pleasing to us, as that of the *Canaries*.

3. That there they hold up their Price, and cause the Company to lose the use of their Stock, and the Freight of their Ships.

To which 'tis answered.

To 1. That if we can be content with *Spanish* Wine, to wit, *Sherries, Malaga's, Alicant,* it will be all one to the *Spaniard*, but much advantage to us, in regard we shall have near twice the quantity, and in barter for Goods, as we now have from the *Canaries*, where but little of our Goods go off, neither do we argue for dissolving, but only reducing that Trade.

To 2. The Mountain Wines of *Spain* and *Portugal* are very good, Green, not over sweet or Luscious, and pleasing.

To 3. If we return, and take in a Lading in *Spain* and *Portugal*, where all Trade ought to be open and free, then that Objection is answered.

Now how advantageous to the Woollen Manufacture, it might be to have a free Trade with *Portugal*, for Wines, Oyle, Shoomack, &c. I find well asserted in a Printed Paper offered to the last long Parliament, whereof I think fit to insert a Coppy.

Whereas the Portugal Trade is very advantageous to this Nation, because it doth annually consume a great quantity of our Manufactures, Fish, &c. and of late declines, because the Sugar and other Commodities of that Country, are either so fallen in Price (here,) or grown so scarce there, as that the Merchants trading thither, cannot procure wherein to have Return, nor the People of that Country wherein to make satisfaction for the Goods they take, which hath occasioned the setting up of Fabricks of their

their own, and the Prohibiting of our Commodities, to prevent the said Inconveniency, being that Country abounds with several sorts of good Wine, and is capable to afford great quantities thereof, which are in a manner totally Prohibited from being brought into this Kingdom, by the great Custom charged on them, of 16 l. 18 s. 11 d. per Ton, as on Spanish Wine, whereas their use, nor goodness, doth not render them capable of paying more than the French.

It is humbly conceived, it may be the Interest of this Nation, that by Act of Parliament, the Custom of the said Wines may be abated, and that seeing the Freight from Portugal, is 40 s. per Ton more than from France, that the Custom may be less than what is charged on the French Wine, for the Reasons following.

1. The abating of the Customes, would certainly introduce the expence of the said Wine, and make them serve to supply the great want of Returns, at present experimented in that Trade, and consequently be a great means to increase the Consumption of our Manufactory in that Country.

2. It would diminish the Importation of French Wines, which it is well known, are purchased with Monies, whereas it is probable, these will always be purchased with our Manufactory; and it may be convenient, to encourage the growth of Wine in Portugal, thereby to lessen the French-Trade.

3. Whereas the Prince of Portugal did about a year since, make a Law to prevent the wearing of Foreign Cloth, Gold, and Silver-Lace, and some other Commodities, and did also set up Fabricks of Bays, and Serges in that Country, because they have not Effects to ballance their Importation, which hath already proved of great prejudice to the said Trade, and may prove very fatal if pursued: It may be hoped, that by thus introducing the expence of their Commodities, and the taking of them in Exchange for our Manufactures, they may be brought to neglect the Observation of the said Law, and the said Fabricks, because the occasion of them will be thus taken away.

4. It may advance his Majesties Revenue, for the present extraordinary Custom is little less than a totall Prohibition, so that the said Wines yield at present very little to his Majesty, whereas if the Custom be abated, they may yield a considerable Sum, and whatsoever may be received less on the French-Wine, will be advanced on these, and probably more, because of their variety and goodness, and also because a great quantity of the Wines of that Country are not so strong as the French.

Now seeing this Wine is not yet arrived, let us treat our Poor, Wet, Wearied Fisherman, (to whom I am beholding,) with somewhat to refresh him, resembling Burnt-Wine, wherefore a word.

Of Ale (or Cyder.)

INto a quart of either, put in a quartern of Brandy, a sprig of spear-Mint, and a quarter of an Orange, four Cloves, then Boyl it, Scum it, and Burn it if you please, as you do Wine, and put to it a pennyworth of Sugar.

Ale and Brandy may be also used to make a Posset.

A SHORT
NARRATIVE
OF THE
SUFFERINGS

And Case of the

Salt - Workers

OF

Sheilds, Northumberland, Durham, &c.

Taken from their Petitions and Papers, presented in *Parliament*,

The Occasion of their Increase.

1. **I**N *Anno* 1627, and 1628, in time of Wars with *Spain* and *France*, Salt was so scarce, it was Sold at 8 s. 9 s. 10 s. a Bushel; and in 1629, upon conclusion of a Peace between *England* and *France*, the *French-King* put out an Edict that none should be Exported, on Confiscation of Goods, and loss of Life.

2. Hence about the same time, Peace being also concluded with *Spain*, about 200 or 300 Sail of Ships were sent to *Spain* for Salt, where that King making an advantage of our Necessities, laid an Embargo on the Ships, which being taken off, there followed so great an Imposition on their Salt, that it came to double the price of Salt then and there made, to the Merchants great loss.

3. This occasioned the Lord Mayor, Aldermen, and Company of Fishmongers of *London*, and divers other Corporations, in *Anno* 1630, to Petition his Majesty *Charles* the first of blessed Memory, not only to Prohibit the Exportation of Salt from *Newcastle*, but likewise to encourage the making of great quantities there, and in parts adjacent, by rendering the Saltworkers a Corporation, both which were granted.

Their Progress and Discouragements.

W Hereupon they Erected many Wharfs, Boyling-Houses, and Pans in those Parts, whereof those at *South-Sheilds*, being Built on spare neglected Church-Lands, the Dean and Chapter of *Durham* compelled them to take Leases, and pay an annual Rent for the same.

In *Anno* 1644, the Scots taking *Newcastle*, dispossessed divers of the Saltworkers of their Salt-Pans, by reason of their Loyalty to his Majesty, and pulled down, and destroyed many others, pretending them to belong to *Popish* and Malignant Owners, on purpose to advance their own Manufacture of Salt.

In 1646, the Scots removing out of *England*, the Saltworkers made hard shift, to restore part of their Ruined Works, and Pans, but to their great Loss. For in 1648, the usurped Powers exposed to Sale all Lands belonging to *Bishops*, *Deans*, and *Chapters*, also the Salt Houses and Pans of the Saltworkers, that lived at *South-Sheilds* being Built upon Church-Lands, they were enforced to purchase the same of the said pretended Powers, or of others who bought them over their heads, at a very dear Rate.

Moreover in 1648, *Sir Arthur Hasterig*, coming to Command at *Newcastle*, (to add to their Miseries,) laid on an arbitrary Imposition of 4 s. a Wey on Salt, and as much on a Chaldron of Coals, for the use of the Garrison as he pretended.

From 1644, to June 1647, the Scotch undermined the *Newcastle-Saltworkers* in their Trade, by an unequal Imposition in the Excise, being a half penny a Gallon, as well on *English* as *Scotch*,* whereas the Duty on *Scotch* (being Foreign,) ought to have

have been as other Foreign Salt, a penny a Gallon, in regard Coals, Labour, and Diet in *Scotland*, (especially during the time of our Troubles, and heavy Taxes;) were cheaper by one half *there*, than *here*.

Besides, the *Scots* for four years together did not pay Excise, till they had brought their Salt into the Market, and Sold the same; whereas the *English-Maker* paid Excise at the Pans, besides the Disparity of Measure between *Sheilds* and *London*, and the wast by the way, was exceeding injurious to the *English* Traders, for 20 wey at *Sheilds*, did not upon delivery make out above 12 wey at *London*, and sometimes less. Whereas the *Scots* not paying till a Sale in the Market, paid for no more than was really made out.

These Reasons being offered to *Parliament*, they took off all Excise from *English-Salt*, to Commence from 24 June, 147, and left but a half penny a Gallon on *Scotch*, as before.

This notwithstanding proved no Redress, to the long suffering injured Saltworkers, who upon experience still finding themselves undermined in their Trade, by the *Scotch-Salt*, obtained an Act of the *Rump-Parliament*, of 12th. of June, 1649. Declaring all Salt not made in *England*, should be understood as Foreign-Salt Imported, and pay Excise accordingly.

VWhereupon, immediately a Knot of *English* Traders in *Scottish-Salt*, that got great Gains by the Ruin of our own Manufacture, (to uphold their filthy Lucre,) make application to *Parliament*, to bring on an Excise of a half-penny a Gallon on *English* Salt, alledging the necessities of the Common-VVearth, the considerable Revenue that would arise thereby, that *Scotch-Salt* was better than our own; that we had a considerable Trade thither, which would be lost, unless we took Returns in *Scotch-Salt*, which would turn to the Merchants great Damage, unless the Duties between both were well moderated. And accordingly the *Rump-Parliament*, from *Midsummer* 1649 laid on an half penny a Gallon on *English* Salt, and one penny half-penny a Gallon on *Scottish*, which continued to 1654, during which time the *Scottish-Salt* undermined the *English*, notwithstanding it paid 33 s. 4 d. a wey, (of 40 Bushels of 10 Gallens each,) more than the *English*, by which means above 160 Pans or VVorks became wast and ruinous, which if restored, would be able to make from 16 to 18 or 20 thousand

wey

wey of Salt yearly, which they believe is as much as ever was Imported into the Nation in one year, by *Scots* or others.

The *Rump-Parliament* being Dissolved by *Oliver Cromwell*, the Saltworkers were in hopes to get some relief by that Change, but met with the quite contrary, for the said *Oliver* and his Council, without staying for the Authority of a pretended Assembly of *Parliament*, did ordain to Unite *Scotland* into one Common VVealth with *England*; and that all *Scotch* Goods for the future, should pass as free, and with the like priviledge, as Goods pass from *Port* to *Port* in *England*.

VVhence the Saltworkers fell into despair, and no less than 80 Pans more and upwards were Ruined then, reckoning it impossible to have vent for a great part of the Salt they commonly made, or could have made.

The Saltworkers by his Majesties happy Restauration, were in great hopes to find Encouragement in the said Manufacture of Salt, but have met with the quite contrary in divers Respects.

1. **T**hose of *South Shields*, were inforced to pay considerable Fines, and to take Leases of the Pans, Grounds, Staiths, and Houles, of the Church, to whom the same were Restored.

2. The Saltworkers of *Northumberland*, *Durham*, &c. *Cheshire*, and *Lancaster*, finding the vent of their Salt, in those *Northern-Countries*, on the Coasts and in *Ireland* much obstructed, obtained from the *Parliament* in 1662, as a compensation of their Sufferings, a high Duty of Customs to be imposed on *Scottish-Salt*, to wit, a halfpenny a Gallon, that is, 13 s. 4 d. a wey, which yet continues, (whereas *French* pays but 1 s. and *Spanish* 1 s. 4 d.) But the intent of *Parliament* in discouraging the said *Scotch-Salt* is frustrate, by reason a Farm of the Customs of all Foreign Salt Imported hath ever since 1662 been Let, and Expires not till *Michaelmas*, 1688. The which Farm hath been extreamly prejudicial to the Saltworkers, the Nation, and his Majesties Revenue.

1. *To the Saltworkers.*

They are informed that by virtue of the specious pretences aforesaid, that *Scotch-Salt* is better than *English*; that unless moderated in its Customs, it would breed an enmity between *England* and *Scotland*, and prevent all Trade thither, and Returns thence, the farmer hath obtained a considerable Defalcation of 800*l. per annum*, as granted to admit *Scotch-Salt* at half Duty of Customs, (as they beleave or as bad,) the same as they are informed being Subfarmed to the chief Traders in *Scotch-Salt*, and to *Scotch-Men*.

By which means, the Condition of the Saltworkers is much worse than formerly, albeit, as aforesaid, when *Scotch-Salt* paid 33*s.* 4*d.* a wey more than *English*, they were undermined in their Trade, and forced to desert 160 Pans.

2. *To the Nation.*

By reason the said Works did Employ many thousands of poor People and Families, who depend on that Manufacture; who are now reduced to Beggary, and incapacitated to pay Taxes towards the Maintenance of a necessary War, should such happen: The Salt being reduced to such low Rates, that there being nothing to be got; Adventurers give over the Manufacture, having vast quantities on their hands, without any Prospect of Sale thereof, unless to great Detriment, and even when their Condition was at the best, they gave over Working five Months in the year, for want of vend, at so low a price as 8*d.* a Bushel.

3. *To his Majesties Revenue.*

In regard the Farm-Rent, (if paid into his Majesties Exchequer,) being but 1000*l. per annum*, (as some have asserted) is inconsiderable, to be put in ballance with a national injury; and such advantage to his Majesties Revenue, as they have long solicited to obtain, as a recompence for the loss of the Customs on Foreign.

For

For Remedy they humbly Crave.

1. **T**Hat the said Farm may be vacated if possible, by his Majesties Interest, or Let, and Subfarmed to them, if not, that for the future, all Customs on *Scotch-Salt*, may be Leaved by Sworn Custom-House Officers and others.

2. That our Fishermen in the *North* and *Irish-Seas*, and at *Iceland*, be obliged to Lade and take in all their Salt, (to be spent in Fishing) in the Ports of *England*, before they put to Sea.

As to the Salt of Cheshire, Stafford, and Worcester-shire.

THe increase thereof is so great, by reason of many new Brine-Springs, discovered from time to time without the cheif Salt-Towns, Seawards, and by the Discouragements put upon their Sales, by reason of *Scotch-Salt* Imported into *Ireland*, and *French Salt* Imported into the Western parts of *England*, but more especially in great quantities into *Ireland*, in return of that great Trade they have with *France*, for their Flesh, &c. since the Act for Prohibiting *Irish-Cattle* first past, the cheif use thereof being to Salt the Beef they Ship off, which is very much, to wit, the Worthy *John Ball*, Esquire, Justice of Peace, affirms, that his Majesty was informed by an *Irish* Earl, that no less than 48 thousand barrells of *Irish* Beef, weighing 2 C. and a half weight each, had in a years time been Landed at *Dunkirk* only, from such like causes it comes to pass, that many thousands of poor Labouring Families are undone, and the Proprietors of Works and Pits reduced also to a wretched Condition. A Share that formerly yielded 60 l. a year, Rent or Benefit, not now rendring above 6 l. Salt being reduced to 6 d. a Bushel at *Northwich*, the most eminent Salt-Town in *Cheshire*, whereas of the Brine, there and in other places of the County, vast quantities of Salt may be made, far excellling either *Scotch* or *French*, in goodness.

Lastly,

Lastly, As a most effectual remedy to these Agreivances, I might name Honourable, or Eminent Persons of *Cheshire*, *Newcastle*, and *Hants*, who have long by themselves or Agents solicited to bring on a small Excise, (or Duty payable on Salt at the Works.) on Native-Salt, on Condition to discourage Foreign, by a high duty of Customs, as an ample Compensation to his Majesty for the loss thereof, and for the advancement of the Fishery.

Against such a Duty, the common Objections raised by the Parliament-Men of Cornwall, and Devonshire, &c. are.

OBJECTION, 1.

That *English-Salt* will not cure their Pilchards, which is a considerable Fishery.

ANSWER,

The design of this Book, is to prove the Excellency of our own Salt above any other, wherefore it ought not to be disparaged without due Tryal, (which we have not heard to be hitherto attempted,) wherein they may have the help of some able Fishermen, that have much Experience in Salting (or curing) of Fish: Moreover the Fishmongers affirm, there cannot want good Success, in regard Herrings require a better Salt than Pilchards, and the former, to wit, Herrings, cannot well be cured with Bay-Salt, (much worse than *English* refined,) and the latter (*viz.* Pilchards) may.

OBJECTION, 2.

That they cannot otherwise dispose of their lean, shotten, or sick Pilchards, but in Baiter for *French* (or Bay) Salt, which serves most excellently for their *Newfoundland* Fishery of Poor-Jack.

ANSWER,

1. The Fishmongers say, there ought to be a Law made, to restrain the catching of Pilchards, (as in *Holland* there is of Herrings; see page 107) after such time as the Shoal begins to be lean, shotten, or sick, as a good medium to preserve, and increase the Breed.

2. That the shotten Pilchards, (as well as Herrings,) cured with a refined Salt, may probably be vended at other Markets, with no less, (if not greater) advantage.

3. The total Prohibition of *French*-Salt is not aimed at, but the Discouraging the expence of it, at home; it may be still had in *France*, and carried to *Newfoundland* without Dammage, (notwithstanding the Proposal,) unless Landed in *England*.

What if you lose somewhat in this (inconsiderable) unfit Fishery, you may undertake better elsewhere, see page 102, 107, besides it were better you shou'd loose something, than the Trade of Salt-making be Ruin'd: Many Brine Springs run at wast, and many thousands of poor Families want Employment, for about half their time every year.

5. The *Newfoundland*-Fishery, as you see in page 93, wants a Revenue to support it, and may be had out of Salt, which if you longer oppose, perchance you will embrace a Shadow, and lose a Substance.

6. In the late times of Usurpation, the Excise of Salt was thus established.

All Salt made, or to be made within <i>England</i> , <i>Wales</i> , or Town of <i>Berwick</i> , which is, or shall be Shipped, or conveyed by Water, to be paid by the first Buyer of such Salt, at the place of Landing, or Unloading thereof, one every Gallon, a halfpenny —	} $\frac{1}{2} d.$
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All other Salt therein made, and not Shipt, or conveyed by Water, to be paid by the first Buyer thereof upon the first delivery, the like — — —	} $\frac{1}{2} d.$
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All Salt upon Salt, that is made of Salt within <i>England</i> , <i>Wales</i> , or Town of <i>Berwick</i> , to be paid by the Maker thereof, upon every Gallon, a farthing —	} $\frac{1}{4}$
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All Foreign Salt Imported, upon every Gallon to be paid by the first Buyer, three-half-pence — — —	} $1 \frac{1}{2}$
---	-------------------

These

These Impositions were first Farmed,	} 15	} thousand pounds	
To Sir Martin Nowel, at			
Then at			20
Afterwards at			24
Lastly, To Richard Best, Esq; at	26	per annum.	

Which ceased after his Majesties happy Restauration.

Now how by the ayd of such a Revenue, the Manufactures of Tin, &c. might be advanced, and the Fishery of the Nation Encouraged, and Establiſhed, I have mentioned in my Plea for the Importation of *Irish-Cattle*, Printed in 1680, the Impression of which (Book) being Sold and gone, I crave leave to Reprint part of that Discourse here, as I hope to do o her parts of it, in a Treatise of Fishery hereafter, viz. in page 12. I thus argue.

Concerning T I N.

I have heard divers Merchants of late years affirm, they could not get the Interest of their Principal by it; and when the Debate about Tin-Farthings happened, the *Pewterers* affirmed, that there was 22000 *l.* worth of Tin at *Smyrna* remaining, that had been some years in the hands of one Mr. *Pythorne*, a Factor there, that he could not sell to any advantage; and it's well known that Tin was never so cheap at home, nor more of it lying on our hands than now, albeit his Majesty ever since 1666. hath received no benefit by his Prerogative of preemption, nor is like to have any for the future; whereas in former times it was farmed at 12000 *l. per annum* Rent.

The Case being thus, give me leave to make a Digression about the improvement of our Native Commodities.

Endeavours have been on foot to restore this fall'n branch of the Revenue by Farming it of his Majesty, and coming to a Composition with the Miners of *Cornwal* to take off all the Tin the Mines yield, or at least 1200 Tons *per annum*, but there were two Rubs in the way; the one was, the Convocation could not well come to such an Agreement, till an Act of Parliament was obtained to bind all particular Miners to stand to such contracts as the said Convocation should make: The other was, the Farmers would not undertake such Bargain without

Covenanting with his Majesty, to supply *England, Ireland*, and the Plantations with Tin Farthings, a pound weight of them to be cut into 16 Pence, that by the profit of these Farthings the Farmers might be enabled to pay their Rent.

This Design was opposed by the Mint, as an abuse to be put upon the Nation; many arguments were then urged against Tin Farthings, whereof I shall enumerate some few; as.

1. That a Metal might be made whiter and harder than Tin, of Litharge of Lead, (that is refined Lead, which proves extraordinary hard and white,) incorporated with Spelter, and some Poysonous Ingredients, *Arsenick, Regulus of Antimony*, &c.

2. That such Metal, when worn, would not yield above two Pence a Pound, or little more, and no Pewterer durst use it, as being contrary to the Laws or Orders of their Company.

3. That Tin Farthings might be Coyned with a Hammer, cast in a Mold, squeezed in a Vice, and be counterfeited by any Pewterer, Letter-Founder, Tinker, Plummer, Smith, Glazier, Tinman, Watchmaker, &c.

4. Hence a Query was put to the Farmers, whether they would change all that were brought to them or not, good or bad, either made by themselves or others? And if so, who should allow the Country and City Brewers their Charges, in sending them up to *London* in Drays and Wagons, with Tellers?

5. They refusing, it was inferred, that if Tin Farthings were Established, His Majesty must receive His Revenue of Excise (and the Duke of *York* his Postage) in Tin Farthings, in regard a Brewer cannot avoid the taking of much Money in Tin Farthings at home of Tub Women and Firkin-Men, and abroad of the Ale-House-keepers that are his Customers.

These Arguments ruined that wretched Design, and I pray let it sleep in its Rubbish.

Afterwards one Mr. *Vane* Deceased, proposed a Design to make Tin the *fundus* of a Bank; to be managed for his Majesty's advantage by Commissioners that were able Merchants, that could pay the Miners by Contract for the Tin quarterly, and be reimbursed by Sales, when it should bear a price, or by others that would have credit in the said Bank: And His Majesty to promote the same, bought up 60000 *l.* of Tin when it was cheap, to wit, at 3 *l.* 8 *s.* 6 *d.* the Hundred weight, of which this was the event.

The

The Plot breaking out, and the Parliament not sitting, such Contract could not be made with the Miners; and the said Tin after it had with Warehouse room, and Interest of Stock, cost about 3*l.* 16*s.* the Hundred weight, was sold at the *African-House* at about 3*l.* the Hundred weight, or little more; and those that bought it so, Shipp'd off most of it to *Holland*, and are great Losers by the bargain. The cause whereof is this:

The *East-Indies* abounds with Tin, which the *Dutch* buy there at about 5*d.* a Pound, and bring it home for Ballast Freight free; and they have brought home so much in former years, as to bring down the price of o*u*r s. See a Book of the *East-India Trade*, Printed in 1667. where in page 9 you have this passage.:

As for Tin there is vast quantities in some parts of *India*, the *Dutch* during the time of the late Proemption of Tin, having brought home in two years 4 or 500 Tons: And it might be more advantageous to the *English* Company, not only to Transport Tin from one part of *India* to another, rather than to send it from *England*; but also to bring Tin from *India* to *England*, for Ballast of their Ships that come with Pepper from *Bantam*, did they not prefer the Kingdoms Interest before their private Profit.

The *Dutch* in August 1678, brought home, as a Letter from *Holland* mentions, above 150 Tons, which is said to be 5*s.* a Hundred weight better than ours; and at first sold it at 3*l.* 5*s.* the Hundred weight, then fell to 3*l.* then to 2*l.* 15*s.* and ours at that time would not sell for above 2*l.* 10*s.*

The case being thus, to apply a Remedy, I humbly address'd my self to the Honourable the *Members of Parliament* that served for the Counties of *Devon* and *Cornwal*; and Propounded,

That whereas we now in *England* make Salt the best yet known in the World, and are notwithstanding much oppressed by Foreign Salt; to Redress which, the Saltworkers have for many years endeavour'd to bring on a small Excise on our own, to recompence His Majesty for the loss of the Customs of Foreign, to be kept out by a high Duty.

1. That they would be pleas'd no longer to oppose such Excise, upon pretence that our *English* Salt would not cure their Pilechards.

Pro:

Promising my Treatise of Salt (in a good forwardness for the Press,) in which should be handled the several ways of making of Salt in *England* and other Countries, and setting forth the Excellency and manner of using our own in curing both Flesh and Fish, for the longest of Voyages through the hottest Climates.

2. That they would vouchsafe to make use of such opportunity to remove all burthens upon Tin, as well Sealing Duty of 4 s. a Hundred weight, which may come to 5000 *l. per annum* (except a competent Recompence to the Officers for sealing such as is free from Iron and Dross, according to Constitution;) as also exporting Duty of 7 s. 4 d. a Hundred, which may come to 7000 *l. a year*, or more.

3. That then a Farm of all the Tin the Mines produce, to be let to the *Turky and Pewterer's Company*; the one will so regulate the Price abroad, and the other at home, that we shall not be undermined by the *Dutch*.

This done, the said Companies may erect a safe Bank, and not be damaged, albeit they have Tin on their hands to a vast quantity and value. The advantages of Banks are great; whereof I shall mention but one; It enables the *Hollanders* to Trade with a dead stock: to wit, when a Laden Ship arrives, the Goods are appraised, deposited in the Bankers Ware-houses, and Credit given at home or in Foreign parts, for about three quarters of their value; which is an incredible advantage in Trade.

I further humbly represented to them, that in the Usurper's time such an Excise as aforesaid in page 154 brought in 26000 *l. per annum*, when Fishery Salt was excepted, and paid nothing, the which was observed to be a notable back door and a Cloak to many fallacious pretences, whereas laying the duty universal, the revenue raised by Fishery Salt, being employed for the advantage of a Fishery Trade, shall much more advance the design, than the payment of such duty can hinder it, especially seeing our Neighbours cannot be furnished with Salt for that purpose so good and cheap as we by 12 or 15 *per Cent*; And in case the same be employed in the *Royal Fishery Company* in *London*, out-parts may complain their Fisheries are discouraged; to which may be replied, that at *London* a duty is paid upon Ballast, but not the like in the out-Ports or most of them, where a

revenue may be levied on Ballast to promote their respective Fisheries; And if such duty be laid universal, and well managed, it may produce 38000 or 40000 *l.* a year. And such a stock as that Employed to encourage our Manufactures, shall enrich the Nation much above a Million a year; I offer how, and most humbly move you to promote:

1. In setting up a Fishery Company, to have 10000 *l.* a year given them to Build Ships and Vessels, to encourage Adventurers to undertake the Fishery Trade, and the making of Twine, Nets, Canvas, and Cordage, at *Clerkenwell* Work-house, not only for their own use, but also for his Majesties store, as in the latter part of that Treatise was propounded. And if they be rendred a Council of Trade, (for which reasons were then given, why they are or may be a most proper constitution,) they will go far in earning such benevolence, and doubtless give such advice as followed shall redress the aggrevances of the Nation about Trade and Manufactures, to which I subjoin; that without considerable Encouragements the Fishery of *England* will be inconsiderable, and that it ought to be undertaken in the *North* and *Irish-Seas* for Foreign vend, but of this at large; God-willing in another Treatise, at present see page 67, 107.

To which may be added, that Doggers may be employed, from *Michaelmas* to *Lady day* in a Winter Fishery to supply *London* with fresh and barreld Cod, perchance with advantage (though hitherto nothing but loss and that considerable hath occurred;) whereas on the contrary in Summer a loss ensues either by a North-Sea or *Iceland* Fishery, or the Vessels must be laid up, and the Men (though not the Companies Boys) discharged, and not to be had when the Winter Fishery is to be renewed.

2. There is a new Art of preparing, whitening, and dressing both of Hemp and Flax, (afterwards more particularly described in my said Plea,) that shall render it of a silver Colour, so fine that of one pound of it, a thred may be made 20 Miles long, and in value to 50 *s.* or 3 *l.* the pound weight Hence we want no Foreign Linnen nor Canvas, which may be barr'd out by a high duty.

Of the refuse or Tow thereof, of Raggs, Old Fishery Nets and Sayls, may be made Paper; whereof we spend in *England* in Writing and Printing, about 1000 Reams a day, or to the value of 120000 *l.* per annum. Good Paper is made in *Germany* and

and *Holland*; and the Art thereof is attained in *England*; but to encourage the same here, there wants a higher duty on Foreign Paper; and a Company with a good stock to undertake the same; the which might be the Stationers Company, with other Adventurers; to whom for encouragement might be allowed the use of 5000 *l. per annum Gratu*; to be taken out in Stationary Wares for the supply of all his Majesties Offices. This doth not suppose that any that are not of the Company are restrained from undertaking it, on their own private Adventures.

3. By the like encouragement, the Upholsterers with others might be induced to undertake the Manufacture of Tapisstry hangings, the benefit of gaining such Manufacture is great, viz,

1. It will save an expence of Foreign Wool, and beget an expence of our own, to the value of One hundred thousand pounds *per annum*, now Imported in Tapestry-hangings.

2. It will cause our Cloaths to go off in *Turkey* in Barter, to procure raw Silk to work up with the said Hangings.

3. It will in the Ballance of Trade save the value of such Hangings yearly to the Nation, and in time become a Staple Commodity to Ship off, in regard we can have Wool, Silk, and Provisions, much cheaper here than in *Flanders* and *Brabant*, the sole Provinces where this Manufacture was formerly made, the skill whereof is now well attained in *England*; but Encouragement in its Infancy, by keeping out Foreign, and a stock to carry it on, is wanting.

4. It will employ many thousands of poor People in Carding, Combing, and Spinning, besides Dyers, Weavers, Worsted-workers, Drawers, and Designers. See the excellent Proposal in Print of Mr. *Francis Poyntz*, His Majesties Tapisstry-maker.

Lastly, If there be yet a Surplus, the Revenue of the Mint craves it; the said Revenue was much too short for Coyning any considerable quantity of our Moneys into smaller pieces than Shillings, even before the Prohibition of *French-Wines*, (which paid 10 *s.* a Ton Coynage duty,) and became a notable Abridgment of such Revenue, namely, 6000 *l.* a year. Moreover to Coyn more Moneys small, is the best way to accommodate the People, and prevent Exportation.

To which may be added that the Mint Act being but temporary, it together with 10 s. a Ton Coynage duty on Wines, &c. and 20. thillings on Brandy, ceased upon Dissolving the *Parliament* about *November*, 1680. so that when 'tis restored, I hope there will be a caution in it; to restore Copper Farthings much wanted, as likewise small silver-Moneys.

To this Discourse of our Manufactures (to which many more may be added, and consequently the Poor employed in them.) I further intimate, that the most renowned *Sir William Petty* hath writ an Elaborate Treatise, most worthy publick View, intituled *Political Arithmetick*, in which he asserts, we may employ the Poor, and gain two Millions a year more than we do, by the People we have, without using any of the Mediums here propounded.

To which might be subjoyned, that we have either almost or quite lost many Manufactures upon the ceasing of the Excise, as Iron, Battery, Brass, Cordage, &c. And that divers other Manufactures might be gained by a higher duty of Customs on Foreign, whereby the poor might be Employed, the Exportation of Coyn and an overballance of Trade prevented, a Discourse whereof might be a large, useful, but uneasy task.

Lastly, It is to be hoped, that none of his Majesties Officers that have long enjoyed profitable Employments, will for the future hinder these measures without propounding better; and now Courteous Reader, to thy Patience and my own pains I willingly put an

E N D.

LAUS DEO.

An Advertisement about Planting the Isle of Tabago.

TO the Courteous Capt *John Poyntz*, I am beholding for the information about the *Isle of May Salt*, page 17, as also for the following Advertisement.

He saith, the *Isle of Tabago* did belong to the *Crown*, and that his Majesty parted therewith to the Duke of *Courland* in Lieu of some Castles in *Guinea*.

V

That

That it is Situated South and by West from the Barbados, at about 40 Leagues distance, in the Latitude of $11 \frac{1}{2}$ degrees being about 100 Miles Circumference, and contains 200 thousand Acres of Ground.

That 'tis better situated than the Barbados, not infested with Hurricanes; and is a most proper Island for the growing of *Cacao*, Tobacco as good as the best Spanish; that it also yields *Sugar-Canes*, Cotton, Ginger, *Indico*, *Anotto*, *Sassafras*, *Vanillos*, *Auras*, and *China-Roots*, *Rhubarb*, and several other Drugs; *Balsam*, *Eustick*, *Lignum-Vita*, *yellow-Saunders*, *white-Wood*, *Cedar*, *Mastick*, in great plenty and large.

That it is stored with *Wild-Hogs*, *Piccaries*, *Armadillos*, and several other sorts of *Flesh*, *Fish*, and *Fowl*, with incredible plenty of *Tortoises*.

That within a Mile of it Eastward, there is a little Island called little *Tabago*, containing about 1300 Acres of Land being well stored with *Goats* and *Deer*.

That on the South East side of *Tabago* (the greater) there is an excellent harbour which will be a free Port.

That this Island is to be Planted under his Majesties Protection, the English to hold in it 120 thousand Acres.

That each person that pays 5 *l.* Passage shall have given them for Inheritance, a Man 50 Acres, a Woman or Child 15 Acres each, to be settled under a Register; Liberty of Conscience to be there allowed, none but *Roman-Catholicks* excepted: That their Articles and Laws are to be seen at large, at the *Kings-Arms* in *Birching-Lane* from two till four of the Clock every Afternoon, where he will attend to treat at large about the Premises.

To make the true Spirit of Scurvy-Grass, and also those which are now publickly Sold by the Names of Plain Spirit of Scurvy-Grass, and the Golden Purging Spirit thereof.

Take a Bushel, 2 or 3, more or less, of large fresh Garden-Scurvy-Grass, bruise it well in a Stone-Mortar, or Wooden one, put it into a Wooden Vessel, pour on so much Water as will cover it two hands breadth or thereabouts, put to it 2 or 3 handfulls of Salt, and a small quantity of Yeast, let it stand a few

Few days till it ferments or works like Ale in the Ton; then distill it off in an ordinary Limbeck or Copper-Still, save the first running, for it is the true Spirit, which if you will have it stronger rectify, or distill it over again upon fresh *Scurvy-Grass*; save the first running as before, and you have a very strong, and the true Essential Spirit of *Scurvy-Grass*.

That which is ordinarily Sold for the Spirit of *Scurvy-Grass*, Plain and Golden Spirit, or as they call it, is made thus, viz.

Take of Common proof Spirit, of the Strong-water-Stillers, what quantity you please, 2, 3 or 4 Gallons, more or less, as you please, infuse or steep in it so much Garden *Scurvy-Grass* as it can well contain, let it steep 12 hours, then still it off, and save the first half of what comes off, which still a second time, and save the first half as before, and you have that Spirit which is commonly Sold; which if you distill over again with fresh *Scurvy-Grass*, it will be yet stronger.

Then take a quart of this Spirit, put it in a Bottle, and put to it three ounces of *Follop* gross Powdered, stop it and let it stand warm either in a Stove, or by a good Fire for 3 or 4 days, till you see it grow very red with tincture of the *Follop*, and then pour it off clear, and this is the Golden Purging Spirit, of which a small spoonfull in a draught of Ale, Beer or Wine, is a moderate Purge, although it were to be wished, that there were a better and safer way of Purging than by this infusion in Strong-water, being unfit for hot Bodies; though for their profit, they who sell it commend it alike to all.

1. This was communicated by a worthy Gentleman.

2. The first Spirit is to be had, at the House of Mr. John Bull, mentioned in page 136, where are also to be had, Marin'd Fish, (of which see page 120,) *Oxfordshire Ale*, *Cardamum Ale*, and Bracker.

3. His advice is, that to fix Gallons of Ale there be put in a quarter of an ounce of *Follop*, (which is a white Purging Powder,) and to the value of a Shilling, of the Spirit of *Scurvy-Grass* right prepared as aforesaid.

A Collection of Letters about the improvement of Husbandry and Trade, by Mr John Houghton Fellow of the Royal Society. The Author publisheth these in single Sheets, and designs one about once a Month; and also would be glad of a Correspondence with such whose Studies or Endeavours incline thereto.

Lemington, and divers other sorts of Salt, are to be had at *Billings-gate*, &c. And *Portsea*, or Mr. *Alcornes* Salt, may be bought in whole sale of the Worthy Mr. *John Bindlos*, a Merchant at the two *Black-mores-heads* in the middle of *Abchurch-Lane*, who I suppose ere long, will Lodge it in a Warehouse in *London*.

To page 119 about the Stewing and Collaring of Eels may be added. That if the Eels be alive, knock their heads against the Floore or Desser and it kills them, rub their heads or tails with a little Sand or Salt and then take off their Skin, which will there begin to peelee, wash them clean, cut off their heads, and take out the Guts at the heads of the Eels, roul them up round, and when thus prepared, scewer them, as in page aforesaid.

Beef Suet to be bought from time to time as occasion requires, beat it with a Rowling-I in, take away the Skins and chop it small.

Ox-Guts mentioned page 136, being troublesome to prepare, are to be had ready done in *Cheek-Lane*.

There is lately Published a small Book, the price whereof is 1 s. 6 d. with this Title, *The Country-Survey-Book: or Land-Meters Vade-Mecum*. Wherein the Principles and practical Rules for Surveying of Land, are so plainly (though briefly) delivered, that any one of ordinary parts (understanding how to add, subtract, multiply, and divide,) may by the help of this small Treatise alone, and a few cheap Instruments easy to be procured, Measure a parcel of Land, and with judgment and expedition Plot it, and give the Content thereof; with an Appendix, containing Twelve Problems touching Compound Interest and Annuities; and a Method to Contract the work of Fellowship and Alligation Alternate, very considerably in many Cases. Illustrated with Copper Plates, by *Adam Martindale*, a Friend to Mathematical Learning. Printed for *Robert Clavel*, at the *Pea-cock* in *St. Pauls Church-yard*, 1682.

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ERRATA.

NO Author (unless he would dwell at the Press) can prevent literal Mistakes, such I pretermitt as Pardonable, those that are Material follow.

Pag. 5. Line 21. for are, read have been. p. 56. l. 4. for under, read thorough. p. 68. l. 24. for Matters, read Melters. p. 91. l. 7. for off at Sea against Berwick, read along the Coast Southwards. p. 121. l. 2. dele and Fish, p. 152. l. 6. for and others, read no others. p. 156. l. 14. for wo, read two.